

FEBRUARY, 1947

PROPERTY OF

No. 2

# American Journal of Orthodontics and Oral Surgery

FOUNDED IN 1915

## CONTENTS

## ORTHODONTICS

Argument for Early Treatment. Everett Tisdale, D.M.D., Boston, Mass.	59
Men's Dentistry and the Orthodontist. Frank W. Nash, D.D.S., Scranton, Pa.	74
Dental Caries in China. Albert Fields, M.D., Los Angeles, Calif.	85
Table Discussion	88
Report of the Secretary	93
Report of the American Board of Orthodontics	94
Report of the Research Committee	96
Report of the Public Relations Committee	97
Orthodontic Abstracts and Reviews	98
Letters and Notes	104
Meetings of Orthodontic Societies	108

## ORAL SURGERY

Third Annual Dental Medicine Number	47
Editorial	47
Fluorine and Dental Caries. H. Trendley Dean, D.D.S., Bethesda, Md.	49
The Amino Acids and Their Deaminating Systems Present in Human Saliva. Robert G. Kesel, D.D.S., M.S., J. F. O'Donnell, E. R. Kirch, Ph.D., and E. C. Wach, D.D.S., M.S., Chicago, Ill.	68
Ammonia Production in the Oral Cavity and the Use of Ammonium Salts for the Control of Dental Caries. Robert G. Kesel, D.D.S., M.S., J. F. O'Donnell, E. R. Kirch, Ph.D., and E. C. Wach, D.D.S., M.S., Chicago, Ill.	80
The Role of Nuclear Physics in Medicine and Dentistry. I. Applications in Medicine. Harold Copp, M.D., Ph.D., Berkeley, Calif.	102
The Role of Nuclear Physics in Medicine and Dentistry. II. Use of Radioactive Tracers in the Study of Bones and Teeth. Harold Copp, M.D., Ph.D., Berkeley, Calif.	109
Hyperparathyroidism. F. Raymond Keating, Jr., M.D., Rochester, Minn.	116
The Normal and Pathologic Physiology of the Parathyroid Glands. F. Raymond Keating, Jr., M.D., Rochester, Minn.	129
Report on the Third Annual Seminar for the Study and Practice of Dental Medicine	138
Editorial. Colonel Raymond O. Dart Appointed Director of the Army Institute of Pathology	142
Organization of the American Academy of Oral Pathology	144

Published by THE C. V. MOSBY COMPANY, St. Louis, U. S. A.



# DEE GOLD Wire

IS "ALIVE" . . . better known to Orthodontists as DEEPEP Wire. It is a true Dee Gold alloy, full of action and spring-back. It is specially compounded to combine inherent strength for assurance against breakage with resilience for controlled pressure in corrective service. DEEPEP is usually preferred in bright annealed form for convenient manipulation and easy precision fitting.

Many Orthodontists find it advantageous to subject the finished appliance to the simplified heat treating process made possible by the Dee HEATREAT Unit . . . a brief immersion sufficing to restore spring-back uniformly throughout the entire structure.

GENERAL OFFICES  
AND PLANT  
1900 W. KINZIE ST.

THOMAS J.  
**DEE & CO.**  
*Precious Metals*  
CHICAGO

DOWNTOWN OLD GOLD  
AND SALES OFFICE  
55 E. WASHINGTON ST.

Vol. 33, No. 2, February, 1947, American Journal of Orthodontics and Oral Surgery is published monthly by The C. V. Mosby Company, 3207 Washington Blvd., St. Louis 3, Mo. Subscription Price: United States, Its Possessions, Pan-American Countries, \$8.50; Canada, \$10.00 (Canadian Currency); Foreign, \$9.50. Entered as Second-class Matter January 14, 1915, at the Post Office at St. Louis, Missouri, under the Act of March 3, 1879. Printed in the U. S. A.

FEBRUARY, 1947

# Orthodontics

**EDITOR-IN-CHIEF**  
**H. C. POLLOCK**

**SECTIONAL EDITORS**

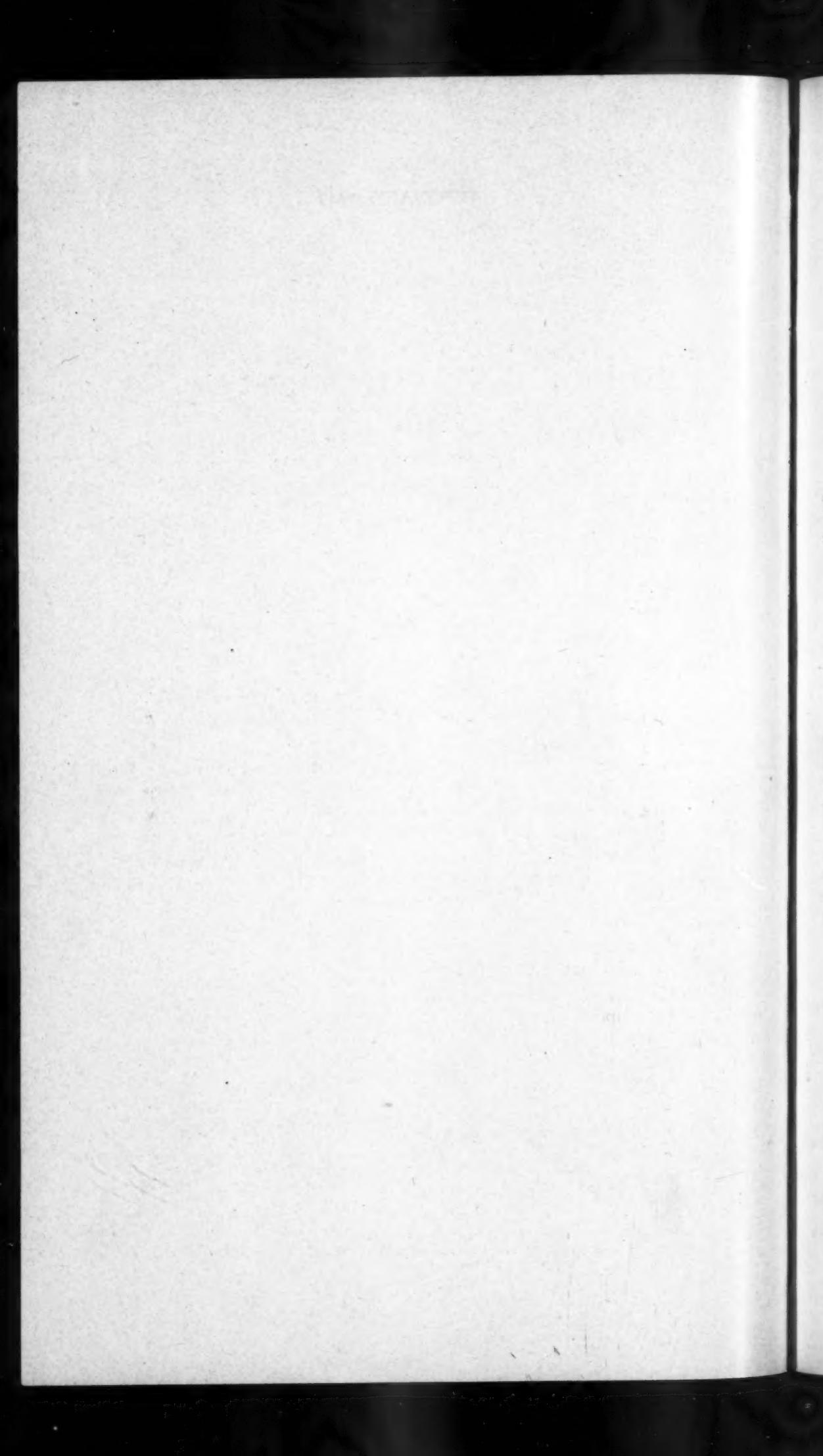
Oren A. Oliver      James D. McCoy      Charles R. Baker      Joseph D. Eby  
Paul G. Spencer      S. A. MacKenzie      Henry F. Hoffman

**ASSOCIATE EDITORS**

**DENTISTRY FOR CHILDREN**  
Walter T. McFall

**ABSTRACTS AND REVIEWS**  
J. A. Sulzmann

Office of the Editor: 8022 Forsythe Boulevard, St. Louis  
Published by The C. V. Mosby Company, St. Louis



# American Journal of Orthodontics and Oral Surgery

(All rights reserved)

---

VOL. 33

FEBRUARY, 1947

No. 2

---

## Original Articles

---

### AN ARGUMENT FOR EARLY TREATMENT

---

EVERETT A. TISDALE, D.M.D., BOSTON, MASS.

---

MAY I first state that there are undoubtedly many practitioners of orthodontics—I know of several, and there are doubtless many others—who are doing work of a similar nature to that which I am about to present. There are probably many whose material is fully as good and possibly better than what I will show. It seemed to us, however, and by "us" I mean the men who will clinic with me, Dr. Bonin, Dr. Sly, Dr. Speers,\* and myself, that some record of this type of treatment should be made to balance or to counteract, if you will, some of the present-day tendencies, and with that thought in mind we were glad to accept the executive committee's invitation to make this presentation.

I have used the term "early treatment" in the title that there might be no previous misunderstanding as to the subject of the paper and following clinic. It is not, perhaps, the best term to describe what we mean. Other terms have been used—Dr. Speers favors "preliminary treatment," I have tried "primary treatment," and Dr. Bonin used "the first stage of treatment." All of these are more accurately descriptive of this treatment, as I shall explain later, than the word "early." Yet, since the term "early treatment" has long been accepted as referring to this general phase of our work, it was used in the title in preference to any of the others whose meaning might not have been so readily self-evident. While speaking of the title, let me say that the word "argument" is used in the Websterian sense as "a reason or reasons for or against something" and has no combative connotation.

---

Presented before the Northeastern Society of Orthodontists, Nov. 5, 1946.

\*Dr. C. P. Bonin, Dr. Walter J. Sly, and Dr. William J. Speers, Boston, Mass.

To go back a few years, Weinberger, in *Orthodontics*, tells us that one Christopher Delabarre in 1820 wrote about treating the deciduous denture. Bogue published a series of articles in the *Dental Digest* in 1912. In Boston our own Frank Delabarre was for many years active in advocating early orthodontic treatment. C. R. Baker has contributed many articles to the literature over the years. Over twenty years ago, Willett wrote, "At what age should we begin treatment? That is almost a time-worn question." Breitner in his excellent article on the influence of moving deciduous teeth on the permanent succession says, "The advantages of correction of these early symptoms of later and more aggravated cases of malocclusion are numerous. Some conditions (e.g., lack of space) lead invariably to more extensive anomalies and others (e.g., false interdigitation) can never correct themselves. Therefore in such cases prompt interference is imperative as a prophylactic measure. Early treatment is further indicated in all cases of faulty mesiodistal relationship of the jaws. . . ." On the other hand, Hellman raises objections to early treatment mainly on the ground that to start treatment early subjects the patient to excessively long periods of treatment, and he wonders "whether those preaching early treatment and preventive measures today are sufficiently mindful of the injuries to the teeth and to the surrounding tissue caused by long periods of treatment." Every year two or three articles for or against early treatment are published, and the question seems no nearer to being answered. We hope that by this presentation of our experiences over a number of years and a demonstration with cases treated, we may be able to put the question of early treatment on a firmer foundation and perhaps answer some of it.

The age group covered by this early or preliminary treatment is that between 3½ and 7 years—the earlier the better in most cases, provided the child is amenable to treatment. The object is to correct definite and severe deformities that may be present at that age, to place the teeth in mechanically advantageous positions so that they and the arches may benefit fully from the considerable growth that is still to take place, to lay a good foundation for normal muscular and habit development, to aid in preventing the formation of bad habits of lips and tongue and even of mastication and speech, to correct bad habits that may exist at this time, and to prevent that crowded condition of the teeth with a lack of alveolar support that is today causing the downfall of so many premolars.

Many of us had long felt that treatment of the deciduous arches had a definite effect upon the following permanent dentition and for many years have treated cases accordingly. Breitner has given us laboratory evidence to support this belief, emphasizing at the same time the need for correct manipulation of the deciduous teeth in order to get the desired results in the permanent dentition. L. W. Baker, in animal experimentation with vital staining, has demonstrated that under general expansion of the maxillary arch new bone was laid down along the palatal suture and at the junction of the alveolar process with the palatal portion of the maxillary bone. The cases to be shown will, I think, add clinical support.

It is not our intention to claim that this early treatment is all that is needed. While it will suffice in a few cases, most cases will require or be benefited by

further treatment at a later period. Here, I feel, is where a great deal of misunderstanding has arisen between what I may call "early treaters" and "non-early treaters." The question has been asked, "Why treat these cases at this early age when they have to be retreated later?" That indicates a completely erroneous conception of the whole process. First let me state that the later period of treatment is not "retreatment," it is additional treatment. That is not a quibble over words either. Retreatment indicates loss of the effects of the first treatment and a beginning over again. The effects of the preliminary treatment should not be lost—if the treatment has been carried out correctly and proper retentive measures have been employed. In fact, the main reason for early treatment is that so much can be gained then that can never be secured at any other time. Then the secondary period is needed to complete the alignment of the permanent teeth, including rotation of individual teeth which often erupt in unfortunate positions. It secures the mesiodistal relationship of the arches if necessary, though this relationship is established in the preliminary treatment and is usually maintained.

The dental arches, from their first differentiation on, have an inherent pattern toward which they tend to grow. They are influenced in this growth, however, by their environment, the pattern of muscular action surrounding and acting upon them, and the use to which they are put—that is, function, both amount and manner. If these environmental influences are abnormal and allowed to continue and influence the denture over the period of its greatest growth, then effects are produced upon it and upon the bony structure of the face that can never, I believe, be overcome. If, however, these abnormal influences are attacked almost in their incipiency and largely overcome by molding the dental arches into more favorable shape and relationship, so that bad habits are no longer encouraged but good habits are substituted, the whole environment will be influenced for the better by a more normal foundation. Function is normal, and therefore stresses and stimuli delivered to areas of growth are for normal growth—throughout this rapidly growing period.

Does it seem reasonable to allow arches deformed in shape and relationship to continue to grow in that manner to 10 or 12 years of age or more before interfering when we know that growth of the supporting structures is being influenced by their malfunction or dysfunction, when we know that bad habits are being developed, and that other bad habits are becoming more deep seated? We also know that some cases where treatment is started at 10 or 11 years of age never can be brought completely to a workable normal—witness the percentage of extractions advocated at the present time. There are very few cases where primary treatment has been practiced in which extraction other than that of occasional third molars is needed or is desirable.

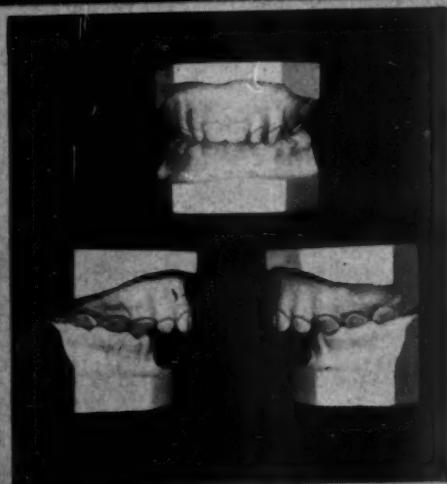
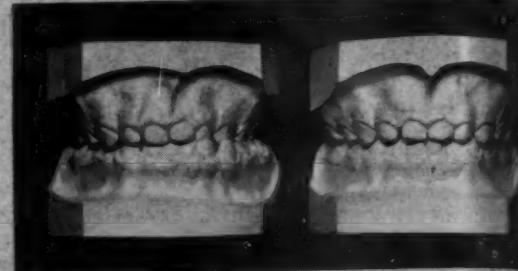
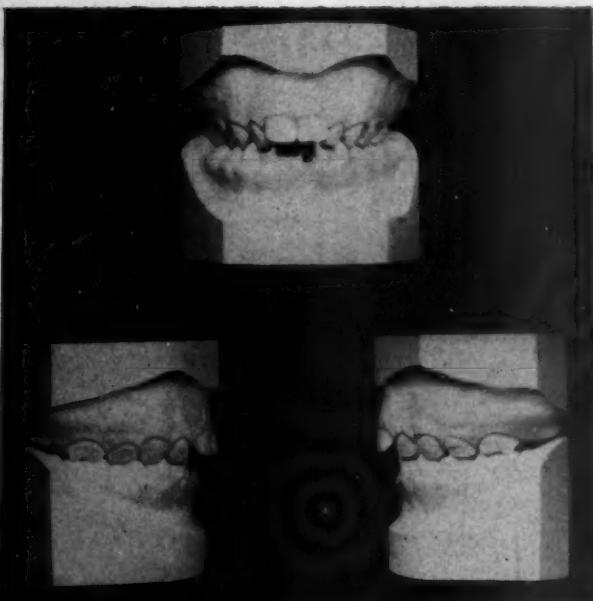
The types of cases which we believe can be benefited by primary treatment are:

Class I cases in which the arches are very narrow (Fig. 1).

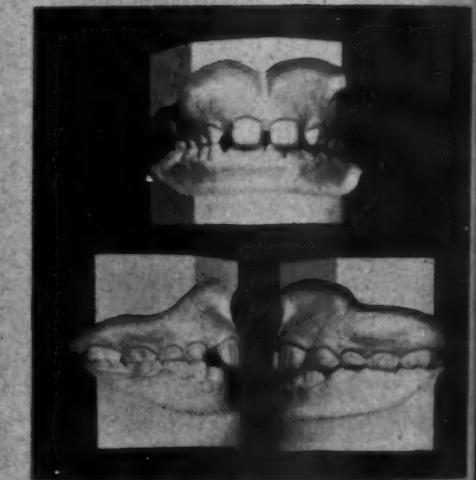
Class II cases that are well defined (Fig. 2).

Class III cases (Fig. 3).

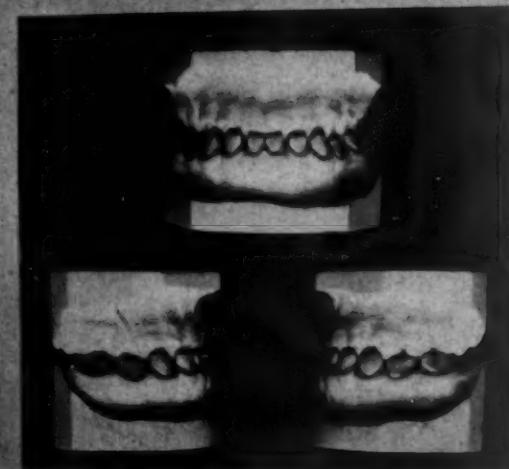
Cases where there is a cross bite of one or more anterior teeth (Fig. 4),



1



2



3

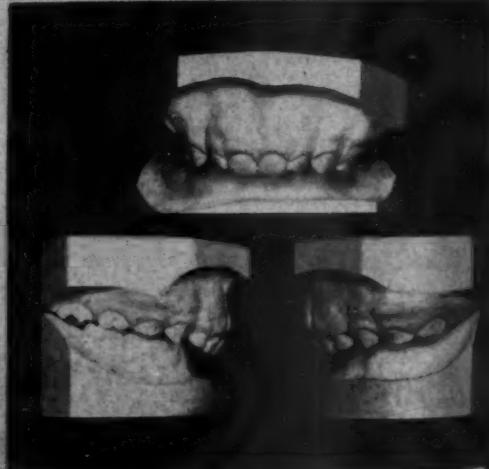


Fig. 1.—Class 1, very narrow arches.  
Fig. 2.—Definite Class II.  
Fig. 3.—Class III.

Figs. 4 and 5.—Cross-bite.  
Fig. 6.—Complete linguoversion of  
mandibular teeth.

groups of buccal teeth, the first permanent molars (Fig. 5), or complete linguoversion of the mandibular posteriors (Fig. 6).

Bear in mind that I am not speaking of what we may call borderline cases—these are kept under observation to watch the trend of development—I am speaking only of definitely marked malocclusion.

Bogue believed that any deciduous arch measuring less than 28 mm. between the maxillary second deciduous molars at the gingival margin at 4 years of age was too narrow to allow the permanent teeth to erupt and align themselves evenly. This is, of course, an arbitrary measurement, and you may not wish to agree to it. But, certainly, arches measuring 21 to 25 mm. between these two points are too narrow, and I think that 28 mm. is wide enough in a very few cases only. Recent measurements done by Cohen show the average to be 33.5 to 36 mm. from tip of palatal cusp to tip of palatal cusp. Allowing 2 to 3 mm. for the difference in point of measurement, the mean average at the gingival margin would be 32 mm. Well-formed arches will show 33 to 34 mm. at the gingival margins, and in treated cases I like to retain with a measurement above 32 mm. if possible. The same article by Cohen shows also that the average change, without treatment, in width across the arches at this point is only 1.5 mm., so we can expect little natural widening. How much better it is to help the child at this early age to have a well-shaped arch when the response of the supporting tissues to tooth movement is satisfactory and readily obtained, than to allow him to go with small narrow arches until his permanent teeth, particularly the premolars and canines, have erupted in irregular positions and the response to treatment is not always of the best. Wait until one or two of the permanent incisors have erupted if you must be convinced of the narrowness of the arches and lack of room for the permanent teeth, but treat before there is much if any resorption of the deciduous molar roots, because only with good root structure present can the underlying permanent buds and supporting tissues be influenced. If the deciduous molar roots are much resorbed, treatment at that stage will only hasten their shedding. Fig. 7 is a Class I case with narrow arches. The measurement across the palate between the gingival borders of the second deciduous molars is 23 mm. The patient is 4½ years of age. Treatment for general expansion should be begun.

Fig. 8 shows a similar condition at a little later stage. Note that the mandibular right central incisor has pushed out both the deciduous central and lateral incisors. If left untreated, the maxillary permanent central incisors will probably cause the exfoliation of one or both deciduous lateral incisors, and the permanent lateral incisors, upper and lower, will force out the deciduous canines. The anterior teeth may align themselves fairly well with the distal of the lateral incisors, upper and lower, contacting the deciduous first molars. The wedging stimulus of erupting teeth will be lost, the anterior segments of the arches will remain underdeveloped. Supposing the premolars erupt in approximately their proper position, then all four canines will be completely locked out and by that time probably the only solution will be the extraction of four premolars. All of which primary treatment aims to avoid with better functional and esthetic results.

Figs. 9 and 10 show a Class I case before treatment and after a year with the lower lingual arch serving as a retainer.

Brodie, appearing before this meeting several years ago, stated that it was his practice at that time to treat cases when the lower permanent incisors could not align themselves for lack of room.



Fig. 7.

**Fig. 7.—Class I. Measurement between maxillary second deciduous molars at the gingival margins, 23 mm.—treatment indicated.**

Fig. 8.

**Fig. 8.—Similar case at later stage—treatment still indicated.**

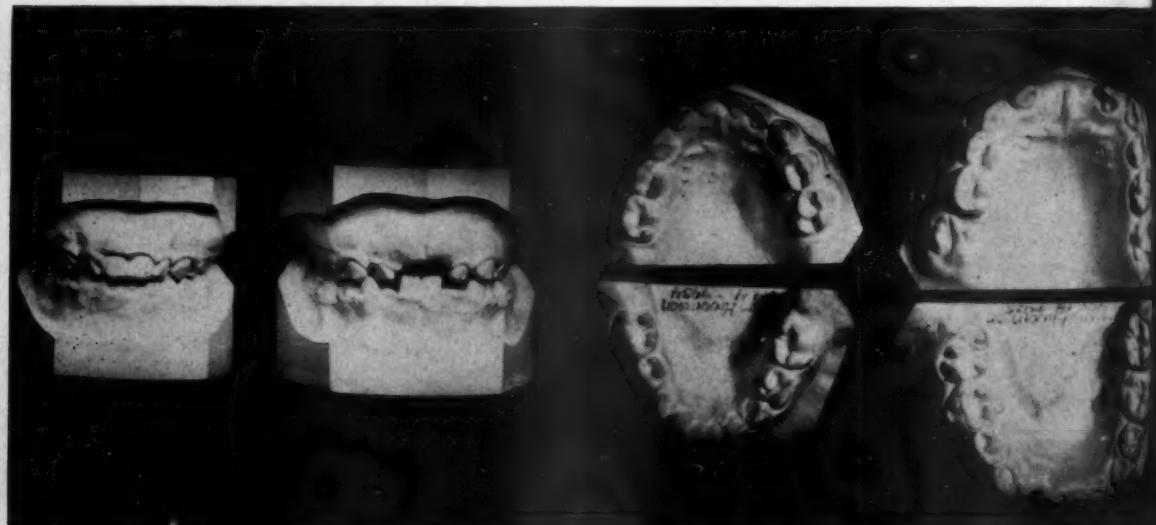


Fig. 9.

**Figs. 9 and 10.—Case similar to Fig. 7 before and after one year of primary treatment.**

Fig. 10.

There have been, occasionally, other statements along that line. There should be more—it is not yet a generally accepted procedure. Ever so often, a patient 6 or 7 years of age presents with crowding of the four permanent incisors, upper and lower, and the story that such and such an orthodontist has said that his or her teeth were too large for the arch and that later four premolars should be extracted—no suggestion being made of possible treatment at that time.

It seems to me that that is not only making a very early guess as to what is going to happen, but also missing a very great opportunity to prevent such a possibility. To be effective, treatment must be started early,  $3\frac{1}{2}$  years to 6 years, the arches generally developed by mechanical applications of gentle force, keeping in mind Breitner's work which showed that the buds of the permanent teeth followed the root tips of the deciduous teeth provided the treatment was not too rapid. Then, when sufficient general development has been obtained, it must be held. Here, as in the treatment of the permanent dentition, retention is fully as important as active treatment. I shall speak later of methods.

Class II cases need, of course, in addition to the general development of the arches, the positioning of one arch in relation to the other. Generally speaking, this consists of slight distal movement of the maxillary molars and a forward positioning of the mandibular arch as a whole. I have said that treatment should be started early in Class II cases that are well defined. I do not include those cases where the molar relationship is edge to edge; for while I do not agree with those who hold that such a relationship is normal at this age, 3 to 6 years, preferring Wallace's exposition of the changing relation of the mandibular to the maxillary teeth as wear takes place, these edge-to-edge relations are not sufficiently distinct at this stage to warrant interference. After all, one of the main reasons for primary treatment is to correct and prevent the formation of bad habits and to create a normal basis for the establishment of good habits both of function and of the surrounding musculature. If, therefore, a case presents at  $3\frac{1}{2}$  to 4 years of age with narrow arches, a definite distal position of the mandibular arch, and protruding maxillary incisors (and some of these conditions can be severe in the deciduous teeth), the stage is all set for the formation and development of all the things we do not want to happen. If (or as soon as) the child is tractable, treatment to correct these conditions should be instituted. Then when conditions are more normal—the arches developed to good form and size and the distal relationship corrected again—retention must be used. First, to maintain any lateral development obtained, second, to maintain the correct mesiodistal relationship of the arches and to remove dependence on elastic traction and establish habit control of normal function. For this I have found nothing better than one or two "heel" bands—which will be demonstrated in the clinic (Figs. 11, 12, 13, 14, and 15).

Class III cases, particularly those with a family pattern of similar conditions, have always been difficult. If, however, some sort of anterior overbite can be obtained early and held, such treatment affords the best chance of controlling the strong tendency of the mandibular arch to thrust forward. Probably the best treatment for the true Class III case is to treat it early and often.

I recently saw for the first time a child of 7 years whose parents had been told by several general practitioners of dentistry in their previous places of residence to allow his teeth to go until he was 11 or 12 years of age before any attempt to straighten them should be made. This child's mandibular teeth, including the recently erupted first permanent molars, were in complete lingual relationship to the maxillary teeth (Fig. 16). One pediatrician had said that

probably his poor eating habits were because his bite was not right—and let it go at that. I do not know that the general practitioners can be severely censored when we cannot seem to agree on a general procedure with regard to these cases ourselves. But, certainly, a case of that type should not be allowed to go any longer without help; in fact, treatment should have been started several years before to establish normal relationship of the teeth and a normal function. We, as orthodontists, should make enough noise about that and other similar types of conditions so that general practitioners throughout the country and pediatricians as well would never allow such a case to progress without consideration. The parents certainly are not to blame. They are for the most part ready and anxious to do what is best—they seek advice—and often get the wrong kind!

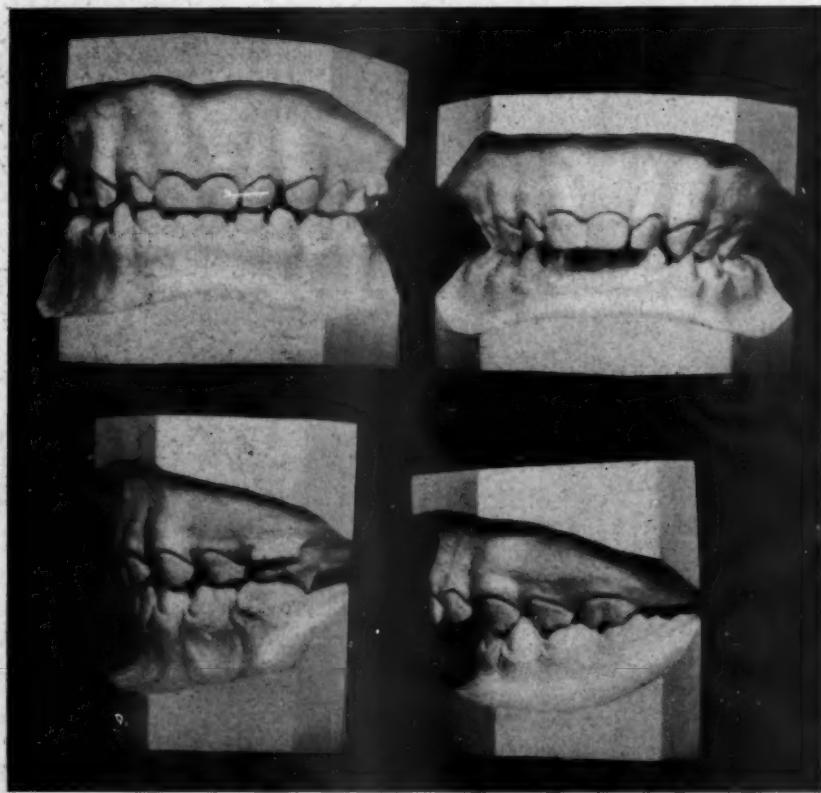
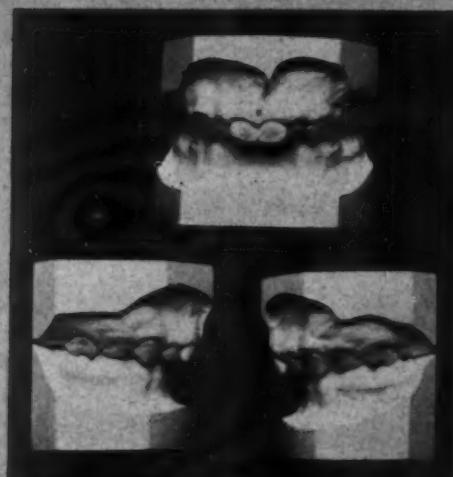
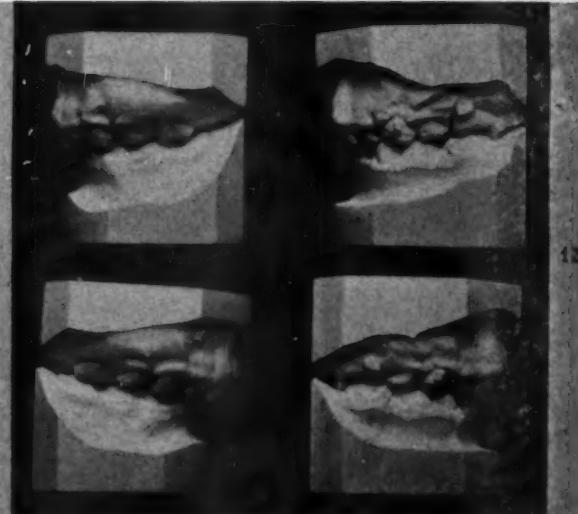
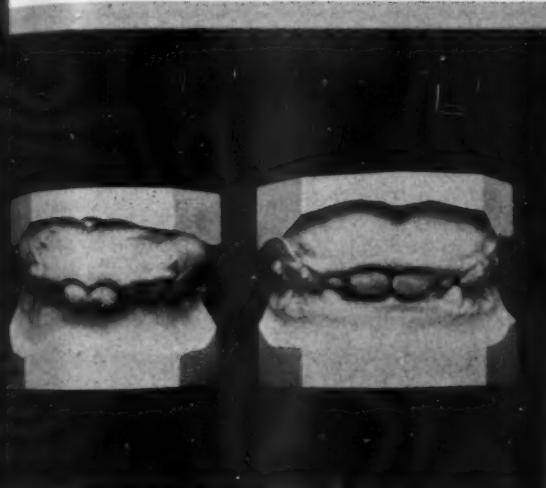


Fig. 11.—Class II case before and after primary treatment.

Figs. 17, 18, and 19 are of a somewhat similar type, though more extreme, which has had primary treatment and is now able to continue its development in a more nearly normal manner. The anterior overbite is still great, and if it persists after the permanent incisors have erupted, as it probably will, further treatment will be needed at a later stage. The anterior teeth are in contact, however, and not impinging on the palatal tissue, and the posterior teeth are able to participate in normal function. How much better off this patient will be than that in Fig. 20, who has been allowed to progress to this stage without treatment.



14



15

Figs. 12 to 15.—Class II cases before and after primary treatment. The third model in Fig. 15 was made one year after palatal retainer was removed.

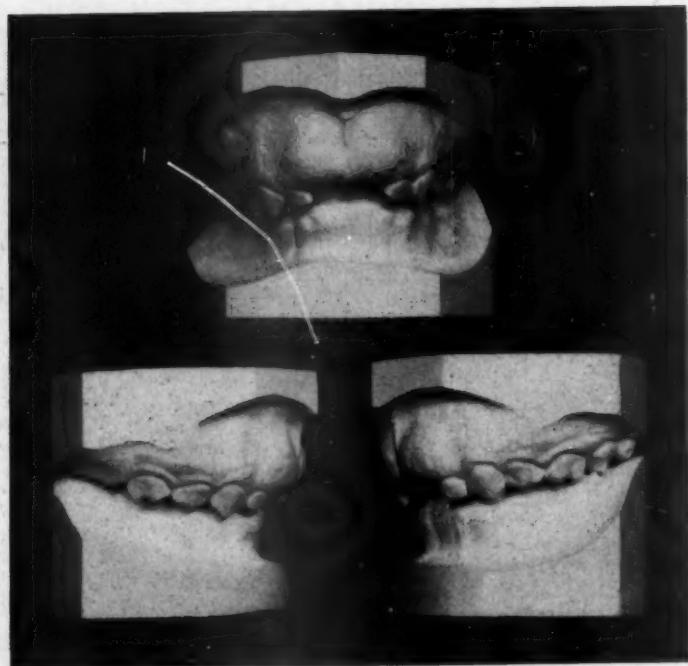
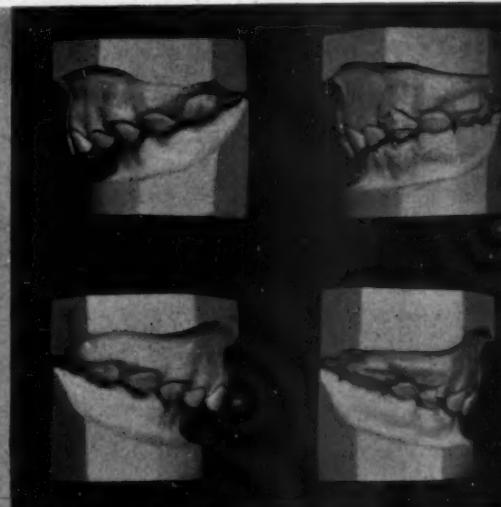
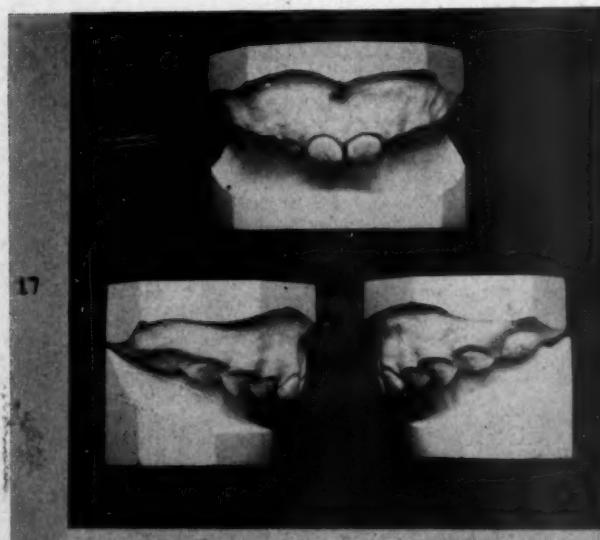


Fig. 16.—Complete linguoversion of mandibular teeth—treatment demanded.



Figs. 17 to 19.—More extensive linguoversion before and after primary treatment.

Anterior cross-bites will usually hold themselves when corrected, but those of buccal teeth, including first permanent molars, unless there are very deep cusps, usually should be held after correction for some time.

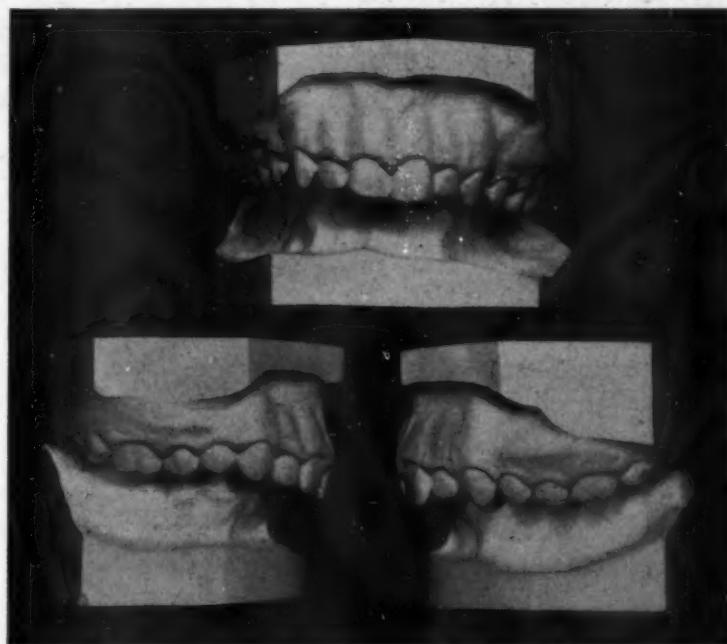
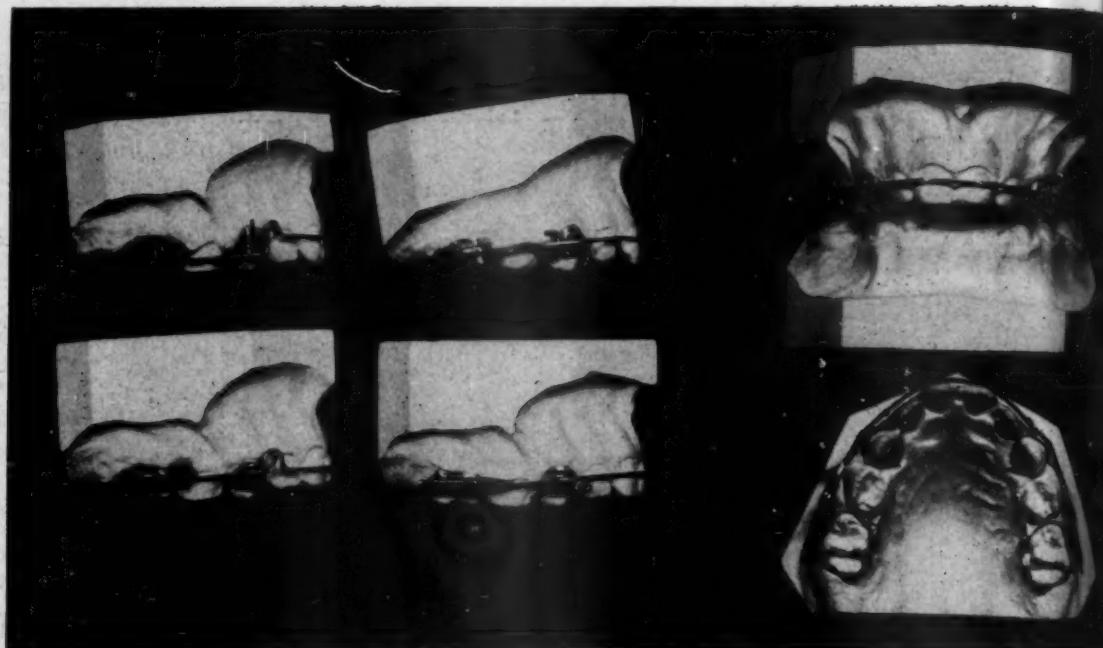


Fig. 20.—Linguoversion untreated at age of 15 years.

On the paper cover of the Year Book of Dentistry for 1945 is the question, "What orthodontic correction is advisable at 3 years? See page 583." And on page 583 is an article which might have been taken from Hellman's paper published in the *Journal of the American Dental Association* in 1942, stating that there are at least two objections to early orthodontic treatment, "The end result to be gained is usually overlooked or ignored [a statement I have been unable to understand], and the length of time to be consumed in gaining the end is not considered," and, later, "Regardless of how early treatment is begun, it cannot be satisfactorily completed before a stabilized stage in development of dentition is reached. This stage is attained after eruption of the second permanent molars, usually at twelve years. There is a variability of three years, but on the average it can be estimated how long treatment will take when the age at which it is begun is subtracted from twelve years." This is given additional strength by a footnote of the editor saying, "This is common sense." There is danger in making a general statement of something that might apply to a number of individual instances. What will be the general practitioner's reaction on the whole? Probably to wait until the patient is 9, 10, or 11, before referring him for observation, so that the severe cases have progressed, bad habits have been well established, and a great amount of general facial growth has had no strong normal dental influence.

Hellman's article, just mentioned, opposes early treatment because of the length of time necessary to bring treatment to completion and because of possible



Figs. 21-24.

Figs. 21 to 24.—Upper left, Junior pin and tube appliance; upper right, plain edgewise; lower left, edgewise with cupid loops; lower right, modified edgewise (Bonin).

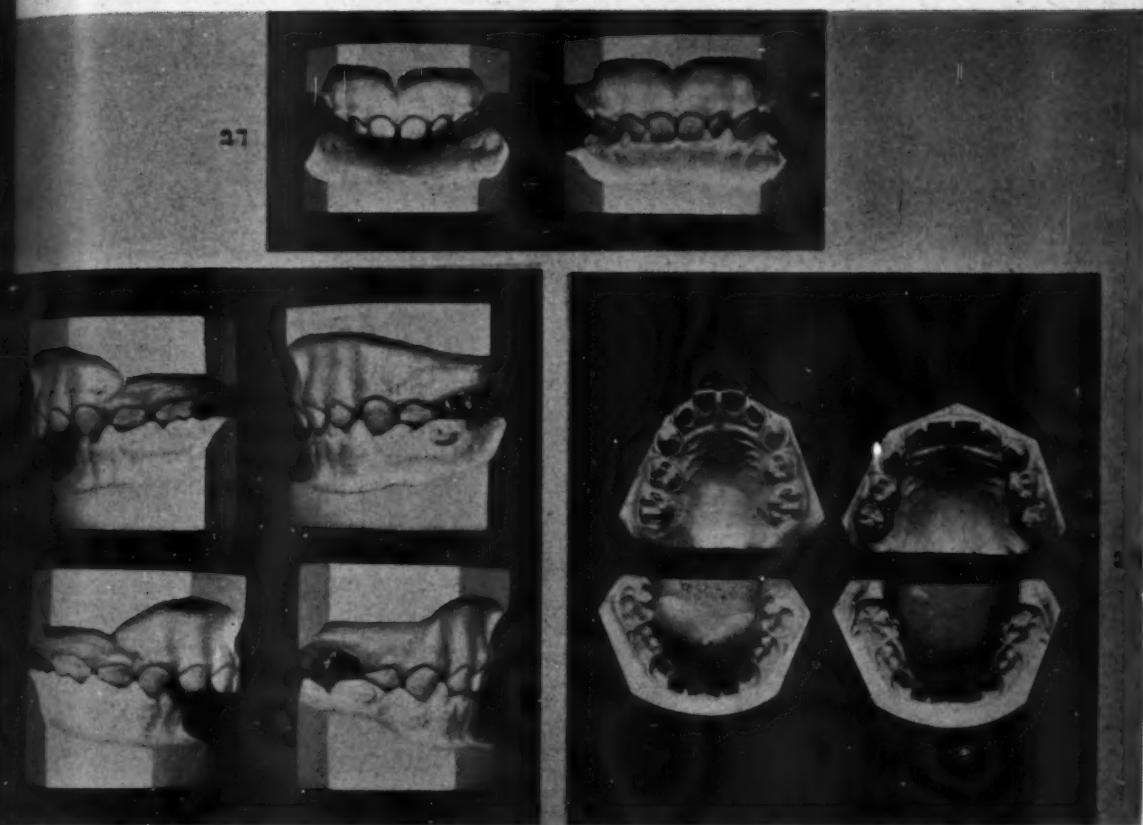
Fig. 25.—Modified edgewise, posterior segments 17 gauge flattened in oval tubes, anterior segment edgewise.

Fig. 25.

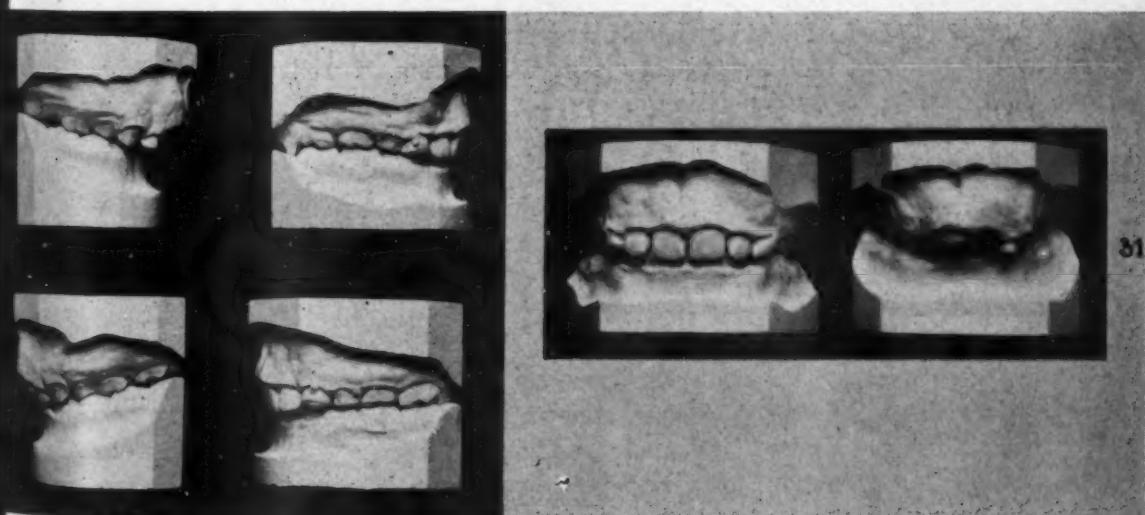


Fig. 26.—Palatal retainer with "heel" bands.

injuries to teeth and surrounding tissues caused by long periods of treatment. Of course there have been and always will be certain cases that require long and extended treatment whether it be started early or late. We have found, however, that most cases demanding primary treatment require relatively short periods of active treatment, between which they may be held by simple retainers that in no way injure the teeth or supporting tissue, or are completely free of appliances. And because the arches are shaped and their relationship adjusted



Figs. 27 to 29.—Class II case before and after primary treatment. Fig. 28 shows heel bands on maxillary second deciduous molars. Fig. 29 shows palatal retainer.



Figs. 30 and 31.—Narrow Class II before and after primary treatment. Note increased alveolar base in treated models.

when the deciduous teeth are present, the hazard to the permanent teeth is reduced to a minimum.

Silver's survey of untreated cases at Forsythe showed that only 20 per cent of Class I cases ever helped themselves and improved and that no Class II or Class III cases did so.

It is our well-considered belief that less stress in orthodontic circles, for a while at least, should be placed on methods and types of appliances and considerably more on the possibilities and advantages of early, preliminary, primary, or first-stage treatment, and that the teeth and faces of our young patients would profit thereby.

What, briefly, would this preliminary treatment consist of? Suppose we take the same case mentioned before—a marked Class II, Division 1, with narrow arches at the age of 4 years. We select an appliance that will give stationary anchorage on the deciduous molars and, preferably, on the maxillary deciduous canines—something like the Junior pin and tube appliance used by Rogers, or for my own preference a modified edgewise appliance developed by Bonin, since expansion of the maxillary arch should produce root movement in the direction desired to influence the underlying buds (Figs. 21 to 25). A light lingual arch in the mandible will suffice since the occlusion will counteract any tipping influence. General expansion and lateral development is obtained with little retraction of the maxillary anterior teeth. Light intermaxillary force is applied by means of elastic traction, the maxillary molars moved slightly distal, and the mandibular arch helped forward to a normal relation with the maxillary. This may take six months to over a year, depending upon the reaction of the individual and the cooperation of patient and parent. The maxillary arch is then retained by means of a lingual wire holding the lateral development only, and the position of the mandible is maintained by means of one or two "heel" bands on the maxillary second deciduous molars, shifting the responsibility for anterior placement of the mandible from elastic force to habit reaction (Fig. 26). The first permanent molars upon eruption and locking, if well formed, will help to maintain the forward position of the mandible. Myofunctional therapy may be used advantageously to help establish the interlocking of the teeth and to build up the musculature. The lingual arch may be left on the mandibular teeth as a retainer and help to guide the incisors to place on eruption. These retainers may be left for several years during which time the patient will be seen infrequently, say once in three months for checking—they are not in the way, do not harm, and there is no reason for hurrying their removal. They will, of course, be removed as the deciduous molars are shed. The arches should then maintain themselves both as to shape and position during transition, the locking of the premolars determining further procedure (Figs. 27, 28, 29, 30, and 31). When transition is complete and the premolars well erupted, active treatment, or second-stage treatment, may be undertaken to adjust alignment, make necessary rotations, and reduce the overbite when desirable. The patient has been under observation and guidance for a good number of years but active treatment has probably not exceeded two to three years at most and the patient has, we believe, a better dental and facial result.

## REFERENCES

- Willett, R. C.: Relation of Dentist to Orthodontist, *J. Am. Dent. A.* 11: 418-427, 1924.  
Willett, R. C.: Periodic Treatment of Malocclusion, *J. Am. Dent. A.* 15: 7, 1928.  
Breitner, C.: Influence of Moving Deciduous Teeth on the Permanent Successors, *AM. J. ORTHODONTICS AND ORAL SURG.* 26: 1152-1177, 1940.  
Hellman, M.: The Optimum Time for Orthodontic Treatment, *J. Am. Dent. A.* 29: 622-639, April, 1942.  
Baker, L. W.: Prefunctional and Functional Influence on Bone Growth, *Harvard Dental Record*, pp. 813-825, January, 1937.  
Bogue, E. A.: Orthodontia of the Deciduous Teeth, *D. Digest*, 1916.  
Brodie, A. G.: Paper delivered before New York Society of Orthodontists, November, 1944, not published, confirmed by letter.  
Weinberger, B. W.: History of Orthodontics, St. Louis, 1926, The C. V. Mosby Co.  
Cohen, J. T.: Dental Arch Development as a Guide to Time for Malocclusion Correction, *Journal-Lancet* 65: 176-178, 1945 (Condensed in *Year Book of Dentistry*, 1945).  
Lipsecomb, W. E.: Time for Orthodontic Treatment, *Texas D. J.* 62: 398-400, 1944 (Condensed in *Year Book of Dentistry*, 1945).  
Silver, E. I.: Forsythe Orthodontic Survey of Untreated Cases, *AM. J. ORTHODONTICS AND ORAL SURG.* 30: 635-659, 1944.

230 BEACON STREET

## CHILDREN'S DENTISTRY AND THE ORTHODONTIST

FRANK W. NASH, D.D.S., SCRANTON, PA.

EFFORTS to advance the dental care of children reminds one of world efforts toward peace. Efforts toward world peace are multidudinous and apparently tremendous. Uncountable sums of money have been spent and almost countless years of effort have been made toward peace, and yet in most of the last three thousand years of man's existence we have had a major war going on. There are reams of paper and tons of printer's ink being used to call attention to the need for dental care for children, and yet the fact remains "every survey made in recent years re-emphasizes the extremely high incidence and prevalence of dental diseases. It has been shown that on the average the teeth of children decay at the rate of 1.5 tooth surfaces per child, that carious lesions accumulate in children of grade school age six times faster than they are being corrected."<sup>1</sup>

On "What Are We Doing About a Dental Health Program," Allen O. Gruebbel,<sup>2</sup> writing in the *New York Journal of Dentistry*, says: "The question is, what can be done about it? We have three alternatives as an approach to the problem:

- "1. Reduce the size of the problem (that is, a reduction of dental disease attack rates) by preventive measures.
- "2. Correct the annual increment to prevent an excessive accumulation of dental needs.
- "3. Develop sufficient resources to provide all of the dental care people need."

"By beginning with the basic fact that every child should receive complete dental care, we can develop the type of program which the dental profession can support wholeheartedly. You and I, as members of the dental profession and as citizens of our communities, must assume our share of the responsibility in bringing this about."<sup>3</sup>

On the question, "What are we doing about it," so far as children are concerned here are some other items:

1. Many school systems throughout the country have a dental service of some kind. In Pennsylvania a state law provides for the examination of every school child: public, parochial, and private.
2. The United States Public Health Service is working on it.
3. One of the newest factors is the Projected National Planning Committee which is the project of a subcommittee of the Council on Dental Health of the American Dental Association.
4. There are seventeen short-term courses in various schools of the country, three postgraduate courses, and two graduate courses for the practice of children's dentistry.

Presented before the Northeastern Society of Orthodontists Nov. 4, 1946.

5. There is also the Forsythe Clinic, the Guggenheim Clinic, The Eastman Clinic, and others, all of which are aimed at bettering the dental treatment of children.

6. Practically all of the states and the District of Columbia have State Health Departments; thirty-eight of these State Health Departments are promoting a dental health program; and thirty-four of these dental units are under the supervision of a dentist. Dental examination and inspection of children are carried out in thirty-one states as a regular activity of the health department.<sup>4</sup>

7. A report of the Los Angeles County Council on Dental Health states in part: "We respectfully offer the following, not as a panacea but as a united starting point for community action:

"(1) Dental health education for school children; posters, essay contests. . . .

"(2) A program of postgraduate education in children's dentistry financed by the state society. The training of eight dentists as educators on the subject of children's dentistry, who will in turn educate one hundred dentists (distributed geographically)—this team of eight men be chosen on a basis of interest and teaching ability, and that the Southern California State Dental Association underwrite their training."<sup>5</sup>

8. From another California area comes this in a News Letter, Council on Dental Health, American Dental Association: "In an open letter Dr. Charles A. Sweet of Oakland, California, stated since 1940 the College of Physicians and Surgeons has placed no less than two postgraduate courses in Children's Dentistry each year and this year we have three courses scheduled and completely enrolled in advance. . . ."

"When a little more than ten per cent of the entire profession of the State of Utah since 1939 has received postgraduate instruction in children's dentistry, this is certainly evidence that the profession of at least one state has accepted a responsibility and has taken action. . . . Ten dentists from Southern California came to the College of Physicians and Surgeons and took our course in Children's Dentistry with the avowed intention of returning home to impart their knowledge to two hundred other dentists that they might better fulfill their obligations to society."<sup>6</sup>

9. A few dental societies have one-day programs on the subject. The Cleveland Dental Society conducts an annual children's health day.

10. The National Dental Hygiene Association, Washington, D. C., is working very much in the interest of improving dental care for children.

11. McBride, Brauer, and Hogeboom have written textbooks.

The foregoing is certainly not a complete list, but it indicates many important factors are at work to alter or to improve this type of service. With it all, however, these facts remain:

There are seven hundred and eighty-four United States members of the American Society for the promotion of dentistry for children. This membership is made up of general practitioners, pedodontists, orthodontists, dental edu-

cators, researchers, those in United States Public Health Service, and a few unusual pediatricians. I am advised that of this membership there are approximately seventy who limit their practice to pedodontics. It is estimated by the Secretary of the Society that not more than seventy-five men in the country in addition to these limit their practice to pedodontics.<sup>7</sup> Thus, we have an estimate that 125 dentists out of 70,000 may be limiting their practice to pedodontics, percentage wise that amounts to 0.001785.

It seems that in a country with 38,792,480 persons between the ages of 2 and 18 years, maybe there should be a greater number of dentists practicing children's dentistry exclusively.<sup>8</sup>

And yet according to News Letter of Jan. 28, 1946, of the American Dental Association, Council on Dental Health,<sup>9</sup> a dental society in a Rocky Mountain state decided not to include a paper on dentistry for children during the annual meeting because "it was generally agreed that the subject of children's dentistry is not one of the most important subjects at this time."

Also, quotations from a letter, Oct. 2, 1946, from H. Shirley Dwyer,<sup>10</sup> Director of Dental Services, State of New Hampshire are illuminating:

"While we have some excellent dentists in the state, the general attitude toward working for children is one of apathy. My greatest difficulty in this state is securing corrections as the men do not wish to work for children.

"Perhaps the reason is a failure to secure adequate fees for this service. The dental schools are beginning to give much greater attention to the teaching of children's dentistry. Tufts, from which school most of our men graduated, is doing a very nice job along these lines. However, I still feel that the majority of the schools should give more time to it and should approach it from a more realistic basis. . . . In the meantime, if the student could be taught proper cavity preparation for deciduous teeth, proper use of matrix on deciduous teeth, and proper amalgam manipulation, plus an appreciation of the practice building opportunities in good dentistry for children, we would have more practitioners willing to accept children.

"As far as fees are concerned, it is not only the education of the public, which we in public health are pounding at and can do better than the private practitioner, it is also the matter of educating the profession. For too long we have conducted children's practice on the railroad basis of half fare for children."

There is more about the dental college situation in a letter dated Oct. 2, 1946, from Arthur B. Gabel,<sup>11</sup> Darby Professor of Operative Dentistry, School of Dentistry, University of Pennsylvania: "In reply to your question as to why more men do not take up the practice of pedodontics, my frank opinion is that many of these men have never been trained to care for children and are more afraid of the child than the child is afraid of the dentist. Further, I believe that many do not appreciate the fact that the practice of pedodontics is decidedly to their advantage economically in that it gives them a continuous supply of patients."

In the opinion of another prominent educator, Dr. Easlick,<sup>12</sup> in charge of the program of graduate study in dentistry for children at the University of

Michigan, more men have not taken up the practice of pedodontics because restorative work for the older adult patients is found to be much more remunerative for the time and energy expended. Very little of the work in a practice for young children can be turned over to auxiliary technical assistants. The opinion of McCall and of other men prominent in the field all tend to indicate that one of the big difficulties in developing an ideal dental care and a wider care for children is the matter of economics. It is, as carried on now by most men, not remunerative. There is an often talked-about element in it, too, that men do not want to bother with children, because they are too difficult to work on. There is no question that this condition exists. We have been making little genuine progress in the treatment of children. What is little genuine progress? I mean that there are few dentists who are doing any real work for children.

There are few parents in the country who are taking an interest in children sufficiently to bring them to a dentist, after service, for example, in a dental clinic has ceased. This last opinion is supported by the following quotations from the pamphlet, "Psychological Aspects of Dental Treatment of Children," by Juliet Ober Bell.<sup>13</sup> Some general questions were asked the parents concerning their desire or expectation of carrying on dental treatment which had begun in the elementary grades, and the results did not seem to furnish much basis for anticipating provision for continued treatment after the clinics had withdrawn their care during the earlier years. The parents seem to appreciate what the clinics had done, but by and large they seem to feel little, if any, responsibility for providing proper dental care for their children. The question is raised, therefore, if the dental clinics by neglecting parent education have not failed to insure a continuation of the services which have been developed with such care and cost.

At a recent meeting of a dental society, a dentist commented to me, "I have lots of children and I cannot treat them at my office, but I would work at a clinic treating them free if such a clinic were provided. The reason I feel I cannot work for them is that I feel that parents cannot afford to pay me anything for the treatment of children, although the same parents pay me handsomely for prosthetic appliances and minor surgery." This man has a diploma from a recognized dental school and was discharged as a captain in the recent war.

Another illustration that is current because the remark was made to the writer in September, 1946, by a man who had one year of training at one of the large well-known dental clinics for children, is as follows: He stated that he did not want any children now as he had so much work from the Veteran's Bureau today that he was too busy to bother with it.

Too many dentists do not regard treatment of children's teeth to be important as arithmetic, for example. Related to this is an element which has not been too much discussed but is important, which is the law in each state relating to school attendance. In the State of New Jersey the law is as follows.<sup>14</sup>

"Every parent, guardian or other person having custody and control of a child between the ages of seven and sixteen years shall cause such child regu-

larly to attend the public schools of the district or a day school in which there is given instruction equivalent to that provided in the public schools for children of similar grades and attainments or to receive equivalent instruction elsewhere than at school.

"Such regular attendance shall be during all the days and hours that the public schools are in session in the school district, unless it be shown to the satisfaction of the board of education of the school district that the mental condition of the child is such that he cannot benefit from instruction in the school or that the bodily condition of the child is such as to prevent his attendance at school."

Chester Robbins, Assistant Commissioner of Education, State of New Jersey, adds the following comment:<sup>15</sup>

"A full day's state aid cannot be given for a pupil who is in attendance for less than four hours. A half day's attendance is not less than two hours. Since State aid under the new law for financing schools is based on 'average daily attendance' it is certainly important for financial as well as educational reasons to have good attendance.

"There is no special provision in the law to excuse pupils for dental treatment in a dentist's office during school hours. This is a matter for local regulation, but pupils cannot be counted present in school when they are undergoing dental treatment in a dentist's office."

Obviously, this leads to inequality. If the children are treated in a clinic or live in a locality favoring dental care by private dentists, they will tend to receive better treatment than in localities where they are cared for after school or on Saturdays by private dentists.

The law relating to attendance in Massachusetts is as follows:<sup>16</sup>

"General Laws—Chapter 72, Section 8, School registers.—The school committee shall cause schoolteachers to keep registers faithfully of attendance daily, and make due return thereof to the school committee or to such person as it may designate. No teacher shall receive payment for the two weeks preceding the close of any term until the register, properly filled up and completed, is so returned. All registers shall be kept at the schools, and at all times during school hours shall be open to the inspection of the committee, the superintendent, the attendance officers, and the commissioner and agents of the department. In computing the average membership a pupil's name shall be omitted when and only when it is known that he has withdrawn from the school without intention of returning, or has been absent ten consecutive days; but the foregoing method of computation shall not affect proceedings against habitual truants, absentees, school offenders, or other persons, under section one of chapter seventy-six or under sections three, four and five of chapter seventy-seven. A pupil who is not present during at least half of a session shall be marked and counted as absent for that session."

Where the laws of a state, as in Pennsylvania, do apparently give a pupil the right to be excused for dental treatment it becomes inoperative in fact because so many teachers and principals feel that there is ample time after school hours for it. In several instances in my own practice I have been advised that

no dentist in such and such a town has ever asked to have a child come during school hours for dental treatment.

Herewith are the Pennsylvania regulations relative to excusing pupils from school to have dental work done:<sup>17</sup>

"Under ordinary circumstances dental work should be done during vacation periods, after school and on Saturday. Whether children should be excused from school to go to a dentist's office is a question for the local superintendent to decide, provided the following conditions are met: When a pupil is excused for this purpose, the time for the appointment should be so arranged as not to interfere with the program of work which the pupil is following in school. The dentist should send the teacher of the public school, or the principal, a written statement giving the exact time the child came for the appointment and the exact time he left. The parent should file a statement with the teacher or principal to the effect that the child was absent during this time for the purpose specified."

Despite the law many teachers in Pennsylvania state that absences for dental treatment are illegal.

Some provisions of the laws of Connecticut relative to attendance are:<sup>18</sup>

"Sec. 8. *Prosecuting Agents to Enforce School Laws.*—Said board may appoint one or more persons, subject to the approval of a judge of the superior court, to be prosecuting agents, who shall diligently inquire into and prosecute for violations of the laws relating to the attendance of children at school, or relating to the employment of children in mechanical, mercantile, or manufacturing establishments, and who shall exercise in any town or city the authority of grand jurors or prosecuting officers in prosecutions for such violations and may conduct such prosecutions personally or by an attorney. Such prosecuting agents may render such aid in the superior court in prosecutions for such violations, and shall give such information with reference thereto, as the state's attorney may require. They shall render to said board such reports as may be required by said board, which may remove any of such agents at its discretion and appoint another in his stead.

"Sec. 42. *Duties of Parents.*—Each parent or other person having control of a child over seven and under sixteen years of age shall cause such child to attend a public day school regularly during the hours and terms the public school in the district wherein such child resides is in session, or while the school is in session in which provision for the instruction of such child is made according to law, unless the parent or person having control of such child shall be able to show that the child is elsewhere receiving equivalent instruction during such hours and terms in the studies taught in the public schools.

"Sec. 43. *Penalty.*—Each week's failure on the part of a person to comply with any provision of section 90; (G.S.) (section 42 of this compilation) shall be a distinct offense, punishable by a fine not exceeding five dollars. Said penalty shall not be incurred when it shall appear that the child is destitute of clothing suitable for attending school, and the parent or person having control of such child is unable to provide such clothing, or its mental or physical con-

dition is such as to render its instruction inexpedient or impracticable. All offenses concerning the same child will be charged in separate counts in one complaint. When a complaint shall contain more than one count, the court may give sentence on the remaining counts. If at the end of twelve weeks from the date of the sentence, it shall appear that the child concerned has attended school regularly during that time, judgment on such remaining counts shall not be executed.

"Sec. 132. *Dental Hygienists.*—Any board of education may employ dental hygienists to cleanse and keep clean the teeth of school children in attendance at the public schools in such town, and the authority therein authorized to appropriate money for the support of such schools in the town wherein such hygienists shall have been employed may make such appropriation as may be necessary for such purpose."

The Education Law of New York State<sup>19</sup> provides that all children between the ages of 7 and 16 years must attend school if in proper mental and physical condition. This is in article 23, Paragraph B, and Section 624, Paragraph A. What constitutes illegal absence under the law is determined by the Commissioner of Education. The following are considered legal: sickness, sickness or death in the family, impassable roads or weather making travel unsafe, religious observance, quarantine, and where a pupil is required to be in court. Illegal absence is due to unlawful detention and illegal employment. Unlawful detention constitutes visiting, hunting, vacation, needed at home, no shoes, and the like. Naturally, there is some flexibility and the local school authorities at times must use their judgment. For example, students attending a press conference, musical festivities, and clinics are approved absences. A pupil is also excused to keep dental appointments. Should the appointment require a half day or even a full day the excuse is accepted as legal.

"There is no deduction if a pupil is illegally absent. State aid to local communities is prepared on average daily attendance but nothing is deducted for an illegal absence. This means that the more days pupils are in school, the more money a school district will receive."

"Concerning absences for appointments at the dentist's office, the school considers this a permitted absence. The judgment of the local school authorities must be exercised in cases of this kind so that undue advantage will not be taken. In marking the school register for absences, a suggested code has been given to the various school authorities so that an absence due to illness may be defined by number as to the exact type of illness. There is also a report which includes the analysis of absences known to be due to illness, and on this report No. 9 is used to indicate "toothache." This same number is also used in the register. Pupils are excused where dental work is necessary and an appointment has been made. Most attendance supervisors may check with the dentists so that undue advantage will not be taken of the privilege.<sup>20</sup>

The school attendance law of Rhode Island reads as follows:<sup>21</sup>

"Chapter 181, Section 1. Every child who has completed 7 years of life and has not completed 16 years of life shall regularly attend some public day school during all the days and hours that the public schools are in session in the city or town wherein the educational facilities are approved by the school com-

mittee of the city or town wherein the child resides; and every person having under his control a child as above described in this section shall cause such child to attend school as required by the above stated provisions of this section, and for every neglect of such duty the person having control of such child shall be fined not exceeding \$20.00; PROVIDED, that if the person so charged shall prove or shall present a certificate made by or under the direction of the school committee of the city or town wherein he resides, setting forth that the child has attended for the required period of time a private day school or received instruction approved by the school committee of the city or town where said private instruction was given; or that the physical or mental condition of the child was such as to render his attendance at school inexpedient or impracticable; . . . then such attendance shall not be obligatory nor shall such penalty be incurred; but nothing in this section shall be construed to allow the absence or irregular attendance of any child sent to school by the person having control of such child."

"The interpretation of this law would mean that an emergency case might arise wherein the child's attendance would be impracticable unless he visited a dentist. It would not mean, however, that the child could be excused from school for visitations to the dentist, when such visitations could easily be made before or after school, on Saturdays, or on other days when schools are not in session."<sup>22</sup>

The law in Maine follows:<sup>23</sup>

"A child is considered illegally absent from school, 'if a child without sufficient excuse is habitually and wilfully absent from school or fails without such excuse to attend school for five day sessions or for ten half-day sessions within any period of six months, he shall be deemed an habitual truant; and the superintending school committee shall notify him and any person under whose control he may be that, unless he conforms to section 83, the provisions of the two following sections will be enforced against them; and if thereafter such child continues irregular in attendance, the attendance officers or any of them shall, when so directed by the superintending school committee or superintendent, in writing, enforce said provisions by complaint' . . . provided that necessary absence may be excused by the superintending school committee or superintendent of schools, or teachers acting by the direction of either; . . ." Revised Statutes of Maine, Chapter 19, Section 86.

The school attendance laws should be phrased so as vigorously to promote regular attendance at the dentist's office. No present law does this. They are designed to force regular attendance in school above everything else, and this thought is dominant in the minds of parents and dentists so far as private practice is concerned.

Some of the important causes of the present inadequate dental care of children may be summarized thus:

1. Inadequate training in most dental colleges.
2. Inadequate emphasis in most dental colleges.
3. Lack of interest by dentists.
4. Dentists are poorly compensated for it.
5. School attendance laws operate against it by forcing children to visit private dentists outside of school hours.
6. Lack of education of parents.

#### 7. Lack of long-range educational programs either of dentists or of laity.

In regard to factors 1 and 2, information contained in the pamphlet, "Graduate, Postgraduate, and Refresher Courses Offered by the Dental Schools of the U. S. for the Year 1946-47"<sup>24</sup> will assist in developing this part of the picture.

There are twenty-two courses in children's dentistry scheduled in the dental schools. Of these, three are postgraduate courses and two are graduate courses, with the remainder being refresher courses varying from four days to three to four weeks. By comparison the same publication lists eighteen courses in orthodontics of which eight are postgraduate courses and eleven are graduate courses. Practically all of the orthodontic courses run one year. There is a total of 37 schools in the list and as of this date eleven do not give any post-graduate or refresher courses. While the number of courses shown above in children's dentistry exceeds the number of courses in orthodontics, actually the number of hours and length of time spent for courses in orthodontics are tremendously longer. The longer courses in children's dentistry are not all filled. Incidentally, children's dentistry is referred to in the courses listed as *Children's Dentistry, Pedodontics, Dental Pediatrics*. It is very evident from a study of special courses given that the curriculum in the majority of schools is directed toward making the dentist a good clinical operator in operative dentistry and in prosthetic dentistry, with some attention centered on oral surgery, largely for adults. A change in school programs that would direct the students' attention primarily toward children is desirable. How to accomplish it is another matter.

We are, or have been at least, living in an age or an era in which the individual has been prone or has been taught by politicians to turn his responsibilities over to some one other than himself. These agencies for the most part have been governmental. It is now becoming evident and is being realized that people cannot shunt responsibilities rightfully theirs without paying for it somewhere along the line. With this turn in the state of the public mind, or at least some segment of it, the time is appropriate to further the campaign of educating parents regarding dental care for their children. Educate them to the idea that it is a responsibility that should be theirs.

A pertinent quotation follows from the pamphlet, *A Dental Health Program for the United States*, distributed by the American Dental Association: "In the matter of dental health, most people fail to recognize their obligation to themselves, their family, and their community. Many who can afford to pay for dental care have not learned that dental health is so essential that it must be purchased, even if luxuries must be foregone. Many neglect their teeth because of the traditional, but unfounded, fear of dental service. Most people who cannot afford to pay for their own dental care do not get it because most communities have failed to recognize their obligation to their citizens. . . .

"The responsibility for providing dental care must be borne in the same manner as the responsibility for providing food, shelter, or any other essential of life. It is the American custom and tradition for the individual to attempt to supply these things for himself. If he cannot do so, the responsibility falls on the family, the community, the state, and the nation successively. . . .<sup>25</sup>

What has all this to do with orthodontics?

Orthodontics was developed as a specialty very largely because strong and vigorous-minded men took it up and developed it. Orthodontics and orthodontists have long been leading elements in the dental profession. They have also been deeply and closely associated with the treatment of children. *Good orthodontic practice can only exist to the degree that it is supported by good children's dentistry.* All over this country there are individual orthodontists who have done a tremendous amount of work promoting better dental care for children. In Oklahoma, Sorells was very successful in arranging a working program with the school authorities in which children could be excused from school for dental treatment. Orthodontists have been leaders in various clinics for children and have helped in an extremely large way in the education of dentists for the practice of pedodontics. The editor of the *AMERICAN JOURNAL OF ORTHODONTICS*, Dr. H. C. Pollock, has made a considerable contribution by his editorials regarding the treatment of children's dentistry and attendance at school. Dr. J. A. Salzmann, one of our members, through his book, *Public Health Dentistry*, has manifested a very notable interest. He has, within the last year or so, called attention to the fact that children's dentistry does not occupy a large portion of the programs of the dental societies of the United States. In short, we have individual orthodontists throughout the country working for the betterment of the treatment of children. Dr. Paul Spencer in his book, *Prevention of Malocclusion*,<sup>26</sup> states:

"Each passing day brings ample evidence that an increased number seek dental services; however, as it becomes very evident that the need for dental services is increasing, *The fact remains that the major portion of all dental service rendered today consists of the construction and placing of artificial dentures.*"\*

This statement was made in 1941, and if my observation is correct, it is essentially true today. Yet children are the whole basis of our profession. The profession must take care of children in some way or the various social agencies now at work are going to bring up a serious charge of neglect. The charge cannot be rightfully made at this time because many men are working to improve the conditions existing. The orthodontists with their close association with children should be among the leaders, it seems to me, in the various campaigns to improve dental service for children. But they have never been vigorously active as a group in this particular effort. The group should be a leader in a campaign to increase the number of men specializing in this field. It should be the leader in a campaign to develop personal parental interest in care of their children. The time is exceedingly right for us as a group to enter such a campaign. It would constitute a real service to humanity and a service with which we should be associated as a group. The writer is not in a position to state just how these campaigns should be waged. But he does feel that these objectives should be aimed at:

1. An alteration in the dental school curricula by which more students have an opportunity to train themselves for specialization in pedodontics, thus build-

\*Italics mine.

ing up a body of dental opinion which will ultimately make itself felt in this field.

2. Changing the school codes in various states so that the child's absence from school for dental treatment by a private practitioner will not be regarded as an absence at all but as an effort for the betterment of himself as much as the study of algebra or arithmetic, for example.

3. Education of teachers, principals, and parents regarding not only the need for the service but the need for proper time to render the service.

4. Improvement of the economic status of this phase of dental practice. It does not belong in the half-fare class.

In conclusion, here is a pertinent quotation from Dr. Robert H. W. Strang's textbook:<sup>27</sup>

"No specialty of the healing art has reached its highest degree of development until practitioners thereof are able to educate the public in such manner as to make it possible for the intelligent and dependable members of society successfully to prevent disease and deformity."

#### REFERENCES

1. Gruebbel, Allen O.: What Are We Doing About a Dental Health Program? *New York J. Dent.* 16: 91, 1946.
2. Ibid., p. 91.
3. Ibid., p. 97.
4. Idem: Dental Services and Dental Personnel in State Health Departments, *J. Am. Dent. A.* 32: 1286-1287, 1945.
5. News Letter, Council on Dental Health, American Dental Association: 1: 1, No. 7, July 30, 1945.
6. Ibid. 2: 1-2, No. 1, Jan. 28, 1946.
7. Erwin, R. M., Jr.: Personal communication.
8. 16th Census of U. S., 1940, Population, Characteristics by Age, Vol. IV, Part 1, p. 8.
9. News Letter, Council on Dental Health, American Dental Association: 2: 2, No. 1, Jan. 28, 1946.
10. Dwyer, H. Shirley: Personal communication.
11. Gabel, Arthur B.: Personal communication.
12. Easlick, Kenneth A.: Personal communication.
13. Bell, Juliet Ober: Psychological Aspects of Dental Treatment of Children, *J. Experimental Education*, Madison, Wis., 1943, p. 62.
14. School Law of New Jersey, Section 18: 14-14.
15. Robbins, Chester: Personal communication.
16. Massachusetts, General Laws, Chapter 72, Section 8.
17. Pennsylvania, School Code, Section 8.
18. Connecticut, Laws Relating to Education, Sections 8, 42, 43, 132.
19. New York, Education Law, Article 23, Sec. 621, Paragraph B; Sec. 624, Paragraph A.
20. Minnich, Robert E., New York State Education Department, Albany, N. Y.: Personal communication.
21. Rhode Island, School Law, Chapter 181, Sec. 1.
22. Rockett, James F., Director of Education, State of Rhode Island: Personal communication.
23. Maine, Revised Statutes, Chapter 19, Sec. 86.
24. Horner, Harlan H.: Graduate, Postgraduate, and Refresher Courses Offered by the Dental Schools of the U. S., 1946-47, Council on Dental Education, American Dental Association, September, 1946.
25. American Dental Association, Bureau of Public Relations: A Dental Health Program for the United States, Chicago, Ill., 1945, pp. 1-2.
26. Spencer, Paul G.: Prevention of Malocclusion, St. Louis, 1941, The C. V. Mosby Co., p. 17.
27. Strang, Robert H. W.: Textbook of Orthodontia, Philadelphia, 1930, Lea & Febiger.

## DENTAL CARIES IN CHINA

---

ALBERT FIELDS, M.D., LOS ANGELES, CALIF.

---

DENTAL caries is not confined to the Occident, nor is it a new disease. Chinese manuscripts of several thousand years ago describe many of the diseases of the gums and teeth known today. The ancient Chinese considered general weakness caused by sexual overindulgence as one of the causes of toothache. A little white worm with a black spot on its head was said to be responsible for the holes in teeth. It is of interest that the people of ancient Mesopotamia similarly believed that toothache was caused by a worm. An incantation to rid the patient of the worm has been unearthed on cuneiforms in the French excavations at Mari in the middle Euphrates.<sup>1</sup> This demonic concept of disease is widespread even today in the interior of China and in many other places. They believe that evil spirits, disguising themselves as worms, insects, or even inanimate objects, may enter the body of an individual to cause toothache, headache, and other bodily pains. The aborigines of Guiana call these evil spirits Kenaimas, and refer to toothache by the expression, "A spirit is eating my tooth."<sup>2</sup>

The ancient Chinese "physicians" had some interesting remedies(?) for toothache, inflamed gums, and dental abscesses . . . saltpeter and garlic made into pellets and inserted into the ear on the painful side, or garlic and horseradish triturated with human milk and a small pellet inserted in the nostril on the good side. Another was a powder to be used by women in the left nostril and men in the right. One of the prescriptions has as its main ingredients the bones of mice. The Chinese have used arsenic to stop toothache for centuries. The simplest mouthwash suggested is the urine of a child, age limit not given.<sup>3</sup>

The manuscripts mention the lancing of abscesses and extractions. Mechanical dentistry and the use of artificial teeth seems to have been introduced from the West in recent times. Today most of the extractions are done by herb "doctors." One sees them on market day with their jars of herbs and organs and strings of teeth. They use pliers and ancient forceps for their extractions and charge the equivalent of twenty cents American money per tooth. I have also seen teeth extracted (?) by traveling "juggler-physicians" by simply painting some colored material on the gum at the root of the affected tooth. Probably some sleight of hand was involved here.

In many of the hsien-fu (county seats) there are dentists with mechanical drills operated by foot pedals. They receive their training by an apprenticeship lasting from a few months to a few years. Naturally, their work is crude and most unsanitary. Aside from extractions, their main work seems to be the placing of gold caps on teeth. The ignorant Chinese soldier and peasant considers a gold tooth as a cosmetic feature. Besides, it is a good way to invest excess cash.

During the war, the high incidence of dental caries among American troops "in the field" in southwest China was a cause for speculation. These men had received a dental check at the base, yet within a few months almost all of them showed tender gums and dental caries. Since the diets were usually ample in vitamins and minerals, another factor must be sought for. Perhaps the local water was deficient in our flourine need or there was the factor of "nervous strain."

Another point of interest was the low incidence of caries in those natives who chewed betel nut, in spite of the general dietary deficiency and starchy rice foods.

Nearly one-tenth of the world's population are chewers of the betel nut. The betel nut is the fruit of the areca or betel palm, *Areca catechu*. The betel leaf comes from the betel vine (*Piper betle*), a plant allied to that which yields black pepper. The areca palm is a native of Malaya and East Indies, and is extensively cultivated over a wide area of southeast Asia, including Southern and Eastern India, Burma, Thailand, and French Indochina. It is a graceful tree with a straight, slender, unbranched stem reaching to 40 or 50 ft. in height and about 1½ ft. in circumference, and bearing a crown of six to nine very large spreading pinnate fronds. The fruit is about the size of a small hen's egg, and within its fibrous rind is the seed or so-called nut. These are hard and heavy; round-conical and depressed at the base, and of brown and gray mottled color. Internally they are brownish-red with whitish veins. They have a not unpleasant astringent taste, and when fresh, a faint cheeselike odor.

The fruits are gathered before they are quite ripe, between August and November. After the husk is removed, they are boiled in water, sliced, and dried in the sun. The slices then assume a brown-black color and are ready for use. A small piece is wrapped up in a leaf of the betel vine (also known as pan), along with a pellet of shell lime or chunam. Usually a little cardamon, tumeric, or other aromatic is added. Each piece of betel, complete with all the trimmings; sells for the equivalent of one-half cent American money.

The habit is very similar to our American habit of chewing gum, but somewhat more colorful. Mastication of the material causes a copious flow of brick-red saliva, and they have no inhibitions as to where they spit it. The mouth, lips, and gums are dyed red, which at first sight is startling. The teeth are blackened and unattractive, but usually not carious.

The active pharmacological principle in betel nut is arecoline. This is an alkaloid superficially similar to some of the parasympathomimetic drugs that are widely scattered sources. These include muscarine, from the poisonous mushroom, *Amanita muscaria* (fly mushroom); physostigmine (eserine), from the seeds of *Physostigma venenosum* (Calabar bean, West Africa); pilocarpine and isopilocarpine from the leaves of *Pilocarpus jaborandi* (Brazil); and the synthetic neostigmine (prostigmine).<sup>4</sup> In none of these allied drugs is there any clue to the possible anticaries effect of the betel nut.

Arecoline is almost never used in human medicine, but is frequently employed by veterinarians. Because of its stimulating action on the intestinal nerve endings it is used for colic, as a mild laxative and as a teniafuge in horses,

dogs, cattle, and sheep. In human beings it resembles pilocarpine in its actions, increasing secretions, and hence is employed by the natives for a masticator and sialagogue effect. Perhaps it also "tends to counteract the relaxation of the bowels to which the heat of the climate so strongly predisposes." Some claim that it also has a mild narcotic effect. It has some diaphoretic action and slight constrictor effect on the bronchi. Because of its miotic effect when instilled into the eye, it has been used in the treatment of glaucoma. Most likely the anticaries effect of the betel nut chewing is due to the alkalinity of the lime or to the slight astringent properties in the nut.

Attention should be called to the relatively high incidence of oral carcinoma. The very poor classes cannot afford to chew a fresh betel nut every day and hence sleep with the used one in a cheek, always the same cheek. As a result of this constant mechanical or chemical irritation, the mucous membrane becomes inflamed and leucoplakia may be followed by cancer.<sup>5</sup>

#### REFERENCES

1. Gordon, B. L.: *The Romance of Medicine*, Philadelphia, 1945, F. A. Davis Co., p. 8.
2. Magnus, Hugo: *Superstitions in Medicine*, English Edition, Julius Salinger, New York, 1907, Funk & Wagnalls, p. 14.
3. Brenner, M. D. K.: *The Story of Dentistry*, Brooklyn, N. Y., 1938, Dental Items of Interest Publishing Co., p. 28.
4. Thienes, C. H.: *Fundamentals of Pharmacology*, New York, 1945, Paul B. Hoeber, Inc., p. 145.
5. Rous, Peyton: *Concerning the Cancer Problem*, Am. Scientist 34: 336, 1946.

## Round-Table Discussion

### A Universal Scientific Approach to Orthodontics

*Introduction.*—Gentlemen, having had the privilege of suggesting the subject for our discussion, I have assumed that I have the right to choose the method of carrying it on. The manner in which I am to start may seem a little out of the ordinary. I am first passing to each one of you an envelope with the photograph of a case enclosed. I would like you to classify the case and return it to me. The purpose of this will be revealed on the return of the envelopes.

(This procedure was completed.)

*Subject of Discussion.*—My subject of discussion, "A Universal Scientific Approach to Orthodontics," of necessity must first consider diagnosis. We are told by authority that our therapy, without a correct diagnosis, will fail. A cursory examination by the unaided eye is a widely used and much preferred method in orthodontics. The result of our first step today is a test of this method; as I expected, no two men classified the case alike. (The photograph showed a case of complete linguoversion of the mandibular teeth to the maxillary teeth.) Although the test, of necessity, was a hurried one, it reveals that this cursory examination method cannot provide us with an exact differentiated classification. The fact that the most widely used method of classification, the Angle method, is based on occlusion alone, and the difficulties continually encountered in the differential diagnosis of dentofacial deformities (which may involve not only the occlusion of the teeth, but the dental arches, alveolar process and supporting jaws, plus several of the facial features) have finally led to a general questioning of the value of the exclusively intraoral methods of diagnosis.

The diagnosis of dentofacial anomalies may be defined as the determination of the differences between the existing denture of a patient and the condition to be established.

The cardinal point of diagnosis is classification.

It is suggested that a classification, to be acceptable, must be based on a uniform and truly comprehensive principle, conformable to the subject, so that all variations can be encompassed. It is my opinion that, in order to make progress in orthodontics, it will be necessary that a universal scientific method of classification be accepted by all. With this suggestion I wish to start our discussion.

(The discussions brought out the following facts: the present intraoral method was simple, and the older men would hesitate to adopt a universal

The Round-Table Discussion was held at the American Association of Orthodontists Meeting, Broadmoor Hotel, Colorado Springs, Sept. 30-Oct. 3, 1946.

scientific system. It was suggested that all schools should adopt the latter system and that progress would come with the younger men. It was even suggested that a world committee consider a universal adoption. All discussions recognized the need of such a system.)

*Leader's Summary.*—A correct and successful treatment of an anomaly is only possible if the diagnosis provides us with a clear understanding of the nature of the deviation. Hence, it follows that for this desirable practical purpose we need the classification which brings order into our confused conception of the endless number of anomalies. This classification must be based on the morphological principle, so that the form relations of a denture, as well as its relations to the head, may be understood.

*Second Consideration.*—The customary orthodontic plaster casts of the teeth do not show possible jaw deformities.

The usual orthodontic facial photographs fail to reveal the dental anomalies that stand in causal relation to the facial features, and these two kinds of data from orthodontic records are seldom adequately related and confirmative.

Radiographic records are seldom complete. It is my opinion that, not only to permit the making of a scientific diagnosis but also to obtain progress through research, in the collection of accurate data, it is necessary that all orthodontists adopt a universal scientific and comprehensive record data.

With this suggestion, I wish to start the second part of our discussion.

(The discussion followed the same trend as the discussion of a universal scientific diagnosis. Again the discussors felt that the uniform record and universally adopted method was a very important step to take in orthodontics; however, they had no suggestions as to how it could be done.)

*Leader's Summary.*—A Universal Scientific record for the practitioner must be practical. A practical system must consist of the minimum-maximum amount of data. It must be easy to learn and should be done routinely by every practitioner.

Such a record system, to be acceptable to a classification that is logical, comprehensive, and based on morphological principles, must be reasonably accurate and scientific and based on objective data, not subjective opinions. It must survey the denture in three dimensions, namely, length, breadth, and height, so that the form relations of the denture and its relations to the head can be determined.

The methods at our disposal that accurately and scientifically record the denture in three dimensions are the cephalometric-radiographic method and the gnathostatic method of Simon.

Due to the fact that the gnathostatic method of Simon has a classification (the cephalometric-radiographic method has not as yet advanced a classification), and that classification is the cardinal point of diagnosis, it is suggested that all orthodontists adopt the gnathostatic method of making denture and facial reproductions.

Complete full-mouth radiographs, as well as jaw films and wrist pictures, should be routine.

The written data should follow a uniform system and should be able to be indexed.

*Third Consideration.*—The adoption of a universal scientific method of diagnosing and recording of data cannot help but have a profound effect on our therapy. Instead of the confusion which seems to permeate the whole of orthodontics at the present time, when men are still satisfied with planless methods for treating symptoms and continue to give undue importance to newly invented appliances, there would be a new concept of therapy. This has been pointed out before by Dr. Lischer, who says that therapy from the newer point of view may be divided into myotherapy, surgical therapy, mechanical and medicotherapy.

(Time was called and therefore we were not permitted to discuss the great importance of this latter part of our subject.)

EARL F. LUSSIER.

---

### Economics

Since our group was, for a short time, divided into two tables, I have asked Dr. Scott Holmes of Muskegon, Michigan, to make a résumé of their discussions before we joined tables, and I have incorporated his conclusions and summaries with mine. I want to acknowledge at this time Dr. Holmes' assistance in formulating most of the summary for our group.

Since the general discussion was that of economics, the first question which arose was that of fees. It was not surprising to note the varied opinions which were received, especially in view of the fact that every section of the country, with the exception of the Far West, was represented at our table. Our discussion was started by Dr. Spahn of New York City, who has been practicing orthodontics for a great many years, and he gave us a very interesting résumé with regard to his philosophy concerning fees. First, he condemned the old-time procedure used by him and some of the older men, which was to charge high prices and sell the services to the patient on a basis of producing idealism. Dr. Spahn felt that the end was very displeasing in that the patient became disillusioned and the profession suffered severe loss of prestige. It was his opinion that extreme variations in costs of very similar cases, based upon the ability of the patient to pay, were unjustified. It was generally agreed that the fee for orthodontic treatment should be determined on the following considerations: (1) the cost of operation and overhead; (2) the value of the services to the patient, which includes both the immediate value and the long-term value as an investment in the future health and welfare of the patient; and (3) the net income to which the operator feels he is entitled. Large fees, small fees, and sliding scale fees were discussed at length; also monthly payments versus the set fee came in for a great deal of discussion. Most of the men in the group were quoting a yearly fee, payable on a monthly basis. It would appear from the discussion that this is the type of charge which is being used by the majority of the men in the country.

ROBERT E. GAYLORD.

### What to Do With Third Molars

A questionnaire was prepared and passed to each of the ten men at the table, to be filled out.

The answers were totaled and tabulated before any discussion took place. As was expected there was considerable difference of opinion, which leads to a healthy discussion, all agreeing that through the process of evolution, Nature has given us a very difficult problem on which some very helpful research is in order.

Following are the questions and answers of the ten men present:

	RANGE	AVERAGE
1. In your estimation, in what percentage of normal mouths is there sufficient room for the third molar?	20-80%	49%
2. In what percentage of orthodontic cases is there sufficient room for third molars?	5-60%	26%
3. If there is not going to be room for third molars, at what age can it be determined?	9-16 yr.	13 yr.
4. If there is not sufficient room, at what age would it be desirable to have third molars removed?	9-15 yr.	12½ yr.
5. Between what ages does the oral surgeon prefer to remove wisdom teeth?	12-18 yr.	15½ yr.
6. Have you had difficulty getting men to remove these teeth, at what you consider ideal time?	4 yes 6 no	
7. Have you ordered any of these teeth out in the bud form, before calcification has taken place?	2 yes 8 no	
8. In what percentage of multiple extraction cases, i.e., four first premolars, do you feel that the wisdom teeth have to be extracted?	10-20%	15%
9. In what percentage of these cases does removal of the premolars prevent necessity of removing wisdom teeth later?	50-75%	66%
10. Between the ages of 12 and 18 how much additional space can we expect the growth process to develop, between the distal of the lower second molar and the anterior border of the ascending ramus?	3-4 mm.	3½ mm.

To summarize the conclusions:

1. In less than half of the normal nonorthodontic mouths, will sufficient room develop to allow eruption of the third molars.
2. In cases requiring orthodontic attention, the chances of having room for the third molars are greatly reduced, and it is desirable to have them removed as early as possible after determining that normal eruption cannot take place.

3. In many of our crowded types it would seem that extraction of the four first bicuspids is preferable to attempting distal movement of the first and second molars and further impacting the third molars.

4. It was the consensus of opinion that a real contribution to orthodontics would be made if a series of jaw plates were taken and evaluated to establish a table showing the space between the distal border of the lower second molar and the anterior border of the ascending ramus, necessary at a given age, if normal eruption is to take place. Then the orthodontist would be sure of his diagnosis and could plan his treatment, which would include the proper disposition of the third molars.

ERNEST L. JOHNSON.

## REPORT OF THE SECRETARY

The report of the secretary covers the period from April 22, 1944, to Sept. 30, 1946.

The American Association of Orthodontists has enjoyed a steady growth since the last meeting in 1944. Ninety-seven persons were elected to membership during that time. Twelve active members and two retired members were lost by death. The active membership as of this date is 797.

Late last year it was suggested by the secretary of the New York Society, that dues of members who had been in active service be waived for a year after their release from such service. The matter was taken up with the directors and, with one exception, they approved this arrangement. According to the secretary's records, there are eighty-four members either still in the service or recently returned to private practice, whose dues for this year have been waived.

The report of the membership is as follows:

Active members, April 25, 1944	721
New members, April 25, 1944, to Sept. 30, 1946	97
Reinstated members	3
	821

Active members—deceased	12
Active members—retired	6
Active members—dropped from membership (nonpayment of dues)	6
	24

Total active members	797
----------------------	-----

Active members whose dues have been remitted	88
Honorary members	11
Affiliated members	5
Army members	5
Retired members	5
	26

Total members of all classes	823
------------------------------	-----

New members were distributed as follows:

Central Section	29
Great Lakes Society	2
New York Society	17
Pacific Coast Society	26
Southern Society	11
Southwestern Society	10
Rocky Mountain Society	2
	97

The active membership is distributed as follows:

Independents	23
Central Section	119
Great Lakes Society	83
New York Society	237
Pacific Coast Society	149
Southern Society	86
Southwestern Society	82
Rocky Mountain Society	18
	797

Respectfully submitted,

MAX E. ERNST, Secretary.

Presented at the meeting of the American Association of Orthodontists, Sept. 30-Oct. 3, 1946.

## REPORT OF THE AMERICAN BOARD OF ORTHODONTICS

The American Board of Orthodontics has just completed a very busy session; not only did this involve five days of effort prior to this gathering but extended over a period of several months before this meeting, our activities being carried on by correspondence.

The increased demand for certification by the Board has called upon our extra energies, and, while this has entailed additional work, it has, nevertheless, been gratifying—since it reflects an increased interest in the purposes and functions of the Board.

It has been interesting to note that, in numerous instances, hospitals and public health organizations have required all orthodontists who were to continue upon their staffs to possess a certificate from the standardizing body which represents their profession. This holds true, also, with the other medical practicing specialists.

The number of practitioners who have been certified by our Board, to date, is 248. At the past sessions we have considered applications of 27 candidates, assigned work to 24 new applicants, and certified 13 who have fulfilled the necessary requirements.

The foregoing statistics do not include the total number of applications in various stages which have been considered at this session, namely 63; for many had to be held over or granted additional time within which to present evidence of qualification for certification.

During the past year we have had the misfortune to lose a valuable member from our Board in the person of Dr. Claude R. Wood—who has retired from orthodontic practice. In keeping with the bylaws of our Corporation, we have filled his unexpired term with a valuable new member, Dr. Stephen G. Hopkins, Washington, D. C.

Likewise, in keeping with our bylaws, which provide that one member of the Board retires each year, it becomes necessary to designate a member to take my place. It being the function of the Board to nominate a new director, the Board has, after careful consideration, unanimously nominated Dr. Reuben Olson, of Wichita, Kansas, whom, as nominee, it will be your privilege to elect.

From its beginning, the Board's work and responsibilities have steadily increased each year. Where in earlier years, but fifteen or twenty applications have had to be processed, the number this year, as we have mentioned before, has risen to 63. The time and expense of such processing, the examination of clinical material, and the reading and grading of many theses, have been exacting work. The cost of the engraving of certificates, of their framing and express, as well as many other expenses incident to the management of a Board such as ours, together with the spiral of increase in expense in every department has made its impact upon the Board, as well as in every other type of enterprise. The Board has faithfully attempted to absorb these advanced costs, very frequently at their own personal expense, but the point has been reached where it can no longer continue on its previous economic basis. To that end the application fee has been raised from \$50 to \$100, which is only in line with other certifying Boards, in medicine and dentistry alike.

One of the pleasurable duties and privileges of the Board has been to aid in the selection of the recipient of the Ketcham Memorial Award as well as to make its actual presentation. This year, in the ceremony which will take place tomorrow morning, the Board is happily confident that you will join in approbation of the selection which the officers of your organization and the Board have made.

Since it is delegated to this Board to officiate both as an educational and judiciary body, our interests are directed toward the advancement of the specialty of orthodontics

---

Presented at the meeting of the American Association of Orthodontists, Sept. 30-Oct. 3, 1946.

in all ways possible to us; one of our special interests being the study of a better nomenclature for orthodontics. To this end, a committee within our Board has always provided for study by applicants a list of terms which we deem proper, although their adoption and application have never been compulsory. This year our efforts parallel those of the Nomenclature Committee of the American Association of Orthodontists, and our conclusions are almost identical.

We hope that the Board will continue to merit the interest and trust of the membership of the organization which brought us into being, and to that end constructive suggestions will always be appreciated.

Respectfully submitted,

FREDERIC T. MURLESS, JR., President, 1946.

## REPORT OF THE RESEARCH COMMITTEE

The Research Committee has been forced to work again in the face of wartime conditions. Most of the departments of dental colleges offering graduate work have found that the supply of graduate students was cut off by the demand of the military services and that students were limited to those from out of the country and those ineligible for military duty.

Following the last meeting of the Association, there seemed to be a general idea that it would be possible to hold a meeting one year later, and plans were laid to conduct both a Research Section and a Prize Essay contest. Then came postponement. Following the precedent set at the time of the previous meeting, it was decided to permit publication of any manuscripts that might come in and to consider such manuscripts in the judging, when and if the contest was held.

When the meeting was definitely set for Colorado Springs, word was sent to all university departments in the United States and Canada, notifying them that the contest would be held and requesting that they submit reports of all major research for judging. At the same time they were requested to notify the Chairman of any research reports that would be suitable for inclusion in the Research Section.

Replies were had from very few of the schools in answer to this letter and only three essays were submitted for judging; one from the University of Iowa and two from the University of Illinois. No promises of research reports were received.

In the face of these discouraging conditions, your Chairman called Dr. Humphrey of Denver and pointed out the fact that he, the Chairman, was in a very embarrassing position with only three papers to report and two of these from his own school. He suggested that the contest be called off until conditions had returned to the point that would permit more schools to participate. Dr. Humphrey did not agree with this view, feeling that the idea should not be permitted to lapse for even one meeting. Dr. Oren Oliver expressed a similar opinion.

Around the middle of July your Chairman wrote to Dr. George Moore at the University of Michigan, requesting that his group act as judges for the papers and this Dr. Moore consented to do. The prize essay was submitted by Dr. E. L. Corlett. The subject was "Mandibular Incisor Position Relative to Basal Bone.\*

In submitting this report your Committee recommends that the amount of the prize be increased to \$500 and that the contest be opened to all orthodontists and orthodontic students. The very small number of theses being prepared in our graduate departments at the present time seems to restrict the contest too greatly. The conditions under which the contest might be conducted in order to avoid any suspicion of collusion could well be similar to those governing the contest conducted annually by the Chicago Dental Society.

ALLAN G. BRODIE, Chairman  
MILO HELLMAN  
B. HOLLY BROADBENT

Presented at the meeting of the American Association of Orthodontists, Sept. 30-Oct. 3, 1946.

\*Am. J. Orthodontics and Oral Surg. 33: 21, January, 1947.

## REPORT OF THE PUBLIC RELATIONS COMMITTEE

In checking over programs of the past, we find that the Public Relations Committee has gone through several changes. In 1936, the committee was first appointed. In 1937, the Socio-economics committee was created, and in 1940 these two committees were united to become the Public Relations Committee.

A group of New York men instigated the plan of printing the various pamphlets, "Getting Ready to Tackle Life," "Facts About Orthodontia," and others. Under the able direction of Mr. Dwight Anderson, this group met monthly. The group was composed of Drs. Henry U. Barber, Jr., Frank Nicolai, Leuman M. Waugh, Joseph D. Eby, and Glenn F. Young. While this committee was active, Mr. Anderson acted as publicity agent and the result was very satisfactory.

The pamphlets were distributed by Mr. Anderson's office very successfully for some time, and a very large number were sent out. When this committee's activities were discontinued, the remaining pamphlets were placed in Dr. Barber's care and he supervised their distribution. Pamphlets were sent to practically all parts of the country. That they were received and appreciated is evidenced by the large number of letters received. The momentum started by this committee is carrying on and there is still a desire for such educational material.

During the Chicago meeting in 1944, Dr. Barber contacted the central office of the American Dental Association, ascertaining if the Bureau of Public Relations of the American Dental Association would accept the responsibility of distributing the remaining pamphlets and of printing more when needed. The plan was looked upon with favor by the Bureau of Public Relations, but some objection was voiced to the pamphlet "Getting Ready to Tackle Life," because it was held to be too fictitious. The Bureau is printing "Teeth, Health and Appearance," and reprinting "Facts About Orthodontics." The models used in "Teeth, Health and Appearance" were not the best, but it was not thought of sufficient importance to cause delay in printing and distributing.

We feel that the contact made with the Bureau of Public Relations of the American Dental Association is an advantageous one, and Dr. Lon Morrey is very sympathetic to our cause and will do all he can in our behalf. I quote from a letter from Dr. Morrey:

"Enclosed is the edited copy of the texts for "Facts About Orthodontics for Health Workers." If this meets with your approval, please advise and we will have it printed just as soon as paper is available. The paper situation is getting tighter every week, but we hope to get a break soon."

We are also sorry for these delays for we had hoped we would have a copy of the pamphlets for your approval. It was thought best to have a Chicago man on the committee to facilitate matters because of his closer contact with the main office. Dr. Harold Noyes was placed on the committee but he has since moved to Portland, Oregon.

We recommend that this plan with the American Dental Association be continued.

Respectfully submitted,

HOMER B. ROBISON, Chairman  
HENRY U. BARBER  
HAROLD NOYES

## Department of Orthodontic Abstracts and Reviews

Edited by

DR. J. A. SALZMANN, NEW YORK CITY

All communications concerning further information about abstracted material and the acceptance of articles or books for consideration in this department should be addressed to Dr. J. A. Salzmann, 654 Madison Avenue, New York City

**The Relations Between Orthodontics and General Dental Practice:** By K. Corisande Smyth, L.D.S. Eng., *Brit. D. J.* 81: 179-192, Sept. 20, 1946.

Many of the cases presented to the orthodontist should never have been allowed to come to the state when active treatment becomes necessary, and many more would have presented a far less difficult problem if they had been referred for treatment years earlier.

Out of 100 cases taken at random from a London orthodontic practice, 25 can be said definitely to have been adversely affected by lack of application of preventive methods. Out of 100 cases in an orthodontic clinic under Middlesex County Council, 50 have been obviously made worse by lack of such methods.

The natural development of a child's mouth presupposes the retaining of the deciduous teeth in a healthy condition until it is time for them to be shed. To maintain the deciduous dentition should be the primary object of those looking after the dental welfare of children up to the age of 6 years, and should still be regarded as of great importance until at least 10 years of age. The whole of the complicated process of change of dentition depends upon the retention of deciduous teeth until their successors are ready to erupt. Equally important is the removal of deciduous teeth before their retention causes displacement of the succeeding teeth, if natural shedding does not occur at the proper time. It must be very strongly emphasized that the value of a sound deciduous dentition should be placed much higher than it stands at present.

It is sometimes suggested that the early loss of deciduous teeth really matters very little, and cases are quoted where there has been no closure of spaces after early loss. However, such cases are quite the exception, and it is never possible to state with certainty that closure will not occur, although arches in which there is obviously generous development of the jaws naturally have a better chance than the narrow cramped type. It is also stated that loss of deciduous teeth before their time does "no more" than change the position of malocclusion from one part of the mouth to another. Even if this is true, it has a profound significance, for the arch anterior to the space has ceased to grow forward at its normal speed, while the teeth posterior to the space move forward far too rapidly. In order to regain space, we have to overcome these two manifestations, both of them difficult to treat, or resign ourselves to extraction of permanent teeth, which would in all probability have been unnecessary if the space had not been allowed to close.

One more argument condoning the early loss of deciduous teeth is that we have no control over the size of the jaws, and that "you cannot put a quart into a pint pot." Fortunately the jaws of a growing child are not cast in a rigid mold which is incapable of response to external or internal stimulus. The very fact of the enormous distortion of bone which can occur from finger- or lip-sucking, or the depression of teeth with formation of elliptical space between them,

caused by thumb-biting or tongue-thrusting, are proof of the great adaptability of bone in response to pressure. When the support of a tooth or teeth from the normal arches is lost, the neighboring teeth are subjected to more—or less—pressure than their proper share, and it is very seldom that some abnormal changes cannot be observed as the result.

The causes of malocclusion in many cases do indeed "go much deeper than the mere mechanical removal of deciduous teeth," but to understand something of these depths we must appreciate what is meant by Lundstrom's descriptive and illuminating phrase "the apical base," as distinct from the alveolar bone which contains the teeth themselves. Alveolar bone certainly can be influenced, either for good or for ill, by alterations in surrounding pressures, and these alterations can be brought about by loss of deciduous teeth before their time. There are many malocclusions so deep-rooted that loss of deciduous teeth is a mere flyweight in the sum total of factors concerned in causation, but that is no reason why such loss should be brushed aside. The cases where early loss can be shown to have been the main factor in causation are sufficiently numerous to warrant very serious attention.

Preventive orthodontics, then, really consists in a knowledge of normal occlusion and development of the child's dentition, and a wholehearted effort to preserve its integrity. Knowledge of the normal is a necessary preliminary to diagnosis of the abnormal, especially the slightly abnormal. How can treatment be carried out successfully if diagnosis is not based on a real understanding of normal conditions?

The chief essential in treating the very young child is to avoid ever having to do any but very small fillings. This ideal can be attained only by very frequent inspections, carried out with extreme thoroughness. Even in later years, an inspection twice a year for every child is the absolute minimum which should be aimed at. An inspection three times a year is often hardly adequate for some mouths. Inspections should not be carried out at breakneck speed; a careless inspection is hardly worth doing, and the numbers scheduled for school inspections are often far too high to allow for sufficient care in each case.

The potential ill effects of tooth loss can be very largely minimized by the use of space retainers. These can be absolutely simple in design, comfortable to wear, and cleanly in use. A removable space retainer need only be worn for part of each twenty-four hours, provided it is worn regularly and pushed firmly into place every time it is used. It need never be worn at meals, thus avoiding risk of food lodgment around the appliance. Cooperation is essential, and usually it is easily obtained if the child is taken into confidence as to the reason for wearing it. If lack of cooperation is persistent, a fixed retainer can be made on very simple lines, two bands on the teeth adjacent to the space being joined by a rigid wire, adapted so as not to form a food trap.

All space retainers should be inspected at least every three months [every month is a much safer procedure.—J. A. S.] to make sure they are being worn correctly and that erupting teeth are not preventing the appliances from fitting properly. The time and trouble spent in using space retainers is saved many times over in later stages of development, and their use by all those who have the care of children's teeth would do much to prevent and limit malocclusion.

The early detection of persistent sucking habits is another way in which the dental practitioner can help to prevent malocclusion. Thumb- and finger-sucking are comparatively easy to spot, but lip-sucking is sometimes less obvious, while tongue-thrusting is often overlooked for many years. Forceful or punitive measures are very undesirable. By far the best thing is to make a strong personal appeal to the child; the line of approach can be varied infinitely, and often complete and immediate success can be achieved by giving the child a sense of

responsibility for the misdemeanor of the thumb or finger, as distinct from a personal sense of guilt. But this line sometimes fails entirely, and it is then worth while to try inserting an appliance in the upper jaw (ostensibly for regulation purposes) which obliterates the comfortable place where the thumb, finger, or lip used to rest. If the tongue is the offender, a flange can be built up on the appliance opposite the space into which the tongue fits. The use of an oral screen is sometimes effective when the habit is nocturnal only.

Mouth breathing may be associated with protrusion of maxillary incisors, gingivitis of soft tissues exposed continuously to the air, and sometimes a narrow maxillary arch with cheeks sagging against the premolar regions. These cases show marked lack of tone in the muscles of the lips and cheeks, and a complete upset of normal air and muscular pressures. The family dental surgeon will be the first to have the opportunity to notice these tendencies, and he it is who should urge the parent to seek the advice of an ear, nose, and throat specialist. Only if the nasal passages are pronounced clear is the way open for orthodontic treatment, which must include exercises for restoring the lost tone to the muscles. Often the habit of allowing the lips to fall apart and the mandible to sag persists after nasal obstruction has been removed.

During the early days of the war the author took a post as a temporary School Dental Officer in an Eastern Counties area. It was the eight months of work in this area which proved such an eye opener as regards conditions obtaining in rural areas, and also brought home so vividly the work which could be done by school dental officers, if they were instructed and given proper facilities, in the prevention of malocclusion. Later on there was the opportunity of carrying out some orthodontic treatment under another local authority, and the author was finally appointed to inaugurate and develop an orthodontic service for the Middlesex Education Authority; so that experience has been gained in various types of school dental service. Also, three and a half years of general dental practice during the war in a small country town, with an ever-increasing proportion of child patients, added another facet to the variety of conditions encountered.

Conversely, there are some general practitioners who regard the orthodontic specialist as a faddist who plays about with wires and gadgets, trying to do the impossible, and who would like to tell the orthodontist that if only extractions were carried out more freely throughout, a lot of fuss would be saved. Obviously these divergent points of view must be reconciled before cooperation is possible.

Take the case of the school dental officer first. Suppose that a dental student interested in children's dentistry has taken a special course or has worked, after qualification, in the children's department of a dental hospital, there learning and applying the elementary principles of preventive orthodontics and studying the growth and development of the child's dentition. He then takes a post as an assistant school dental officer and tries to apply his recently acquired knowledge. Probably the first thing that will happen is that he will be called upon to explain to his senior dental officer why he has treated far fewer children, in the same period, than his colleagues do or his predecessor did. The answer will be that he has filled more deciduous teeth, done more extensive fillings in permanent teeth, done more sealing and polishing and gum treatment, and extracted fewer teeth, especially deciduous teeth. He may have fitted some space-retaining appliances. He may also have spent some time in talking to children, and perhaps to parents, about the care of the teeth. Much of this does not show on records; he may have worked longer hours than strictly required, and yet show figures below those expected of him. The senior dental officer should, and probably will, be sympathetic if he is satisfied that genuine sound work is being done.

Here is where the real difficulty comes to light. The senior dental officer may have to explain the discrepancy in figures to the medical officer, who in his turn has to explain it to his committee. The medical officer may have little knowledge of dentistry, much less of preventive orthodontics, yet it lies in his hands to direct the policy of the dental service. Most medical officers in point of fact leave things very much in the hands of their school dental officers, but in some cases, I believe, there is a constant struggle for independence. It seems quite wrong that the medical officer should have the power to direct or veto the decisions of the senior dental officer, and still more wrong that, even if the medical officer himself is certain that the dental policy is right, upon him lies the onus of convincing his committee and obtaining from it permission to change policy or embark upon extra expenditure. The result of this arrangement, in some cases, is to make the school dental officer reluctant to initiate changes and improvements in the dental service, especially if such changes involve a reduction in the statistics representing work done, or an increase, direct or indirect, in working expenses.

There is in some areas (unless recent changes have taken place) a system of "points" in operation, to check the amount of work done by each dental officer. The "point value" of a filling is of course higher than that of an extraction, the ratio being 3:1 in the particular area quoted. But all fillings are rated at the same value, so that there is a deterrent against uniting adjacent cavities, and a great incentive to fill only pinhole cavities. No points are awarded for dressings, and a root filling secures only one point. This system is so obviously open to abuse that it would seem necessary to review the methods of checking the work of dental officers in all areas, with a view to making the method of keeping records compatible with sound work done at a reasonable speed, while necessarily being a check on slackness and bad timekeeping. The medical officer may finally adjudicate on any case where insufficient "points" are earned by a dental officer, and it might go hard with a newly-qualified recruit to the dental service, in fear of losing his post, and hardly feeling justified in having the courage of his convictions, if his "score" was too low.

At the present juncture it is of the utmost importance that all senior dental officers should take steps, to be supported by the British Dental Association, to see that no terms are imposed upon them and their staffs which are incompatible with the best type of work, and this should include provision for preventive orthodontics. It should not be possible for a school dental officer to be overridden by the medical officer in any purely dental matter. The school dental service will not be an efficient unit in the National Health Service until it is under the administrative control of the senior dental officer.

Another aspect of the same picture is the practice of the overworked general practitioner. War conditions have hardly yet been relieved, and the great majority of practices are heavily overburdened with work. In some cases, it must be admitted frankly, the quality of work has been allowed to suffer. The provocation has been very great—long hours, traveling difficulties, shortage of secretarial staff, difficulty in getting equipment repaired, etc.—and a certain amount of short-cutting has perhaps been inevitable. Urgent work has taken priority, and much has had to be left untouched. The sense of frustration in being confronted with more work than it is humanly possible to do has been very wearing and has had a bad effect on morale. It is vitally necessary that this effect should be counteracted vigorously in every one of us, or there is a danger of standards being permanently lowered. Most of all, it is important that standards should be kept high where the welfare of the children is involved. Slackness where the child's dentition is concerned cannot be excused on any grounds, as its effects are so serious and far-reaching.

The orthodontist has, as it were, a bird's-eye view of the work done in practices and clinics spread far and wide, and is sometimes placed in a very difficult position. Seeing the children at regular intervals, probably more frequently than the general practitioner, the orthodontist would certainly be considered responsible for any lapse in the care of the mouth which might come to light subsequently. Often the parent specifically requests the orthodontist to examine the mouth and report whether or not a visit to the dental surgeon is necessary—a very reasonable request when an appointment is so difficult to arrange during school holidays. Sometimes it happens that, apart from a parent's request, a cavity is discovered, or sealing seen to be required, and when this is mentioned the reply is that a visit has just been made, the report having been "no treatment needed."

These situations call for tact, certainly, but also for honesty and frankness—in fact, for cooperation. In the first case, where the parent has asked for an examination, there should be no difficulty; a charting should be made of cavities, deciduous teeth ready for extraction, sealing, polishing, or gum treatment if required. Cavities should be noted, whether very small or more urgent, especially if difficult to detect. These details should cause no offense; on the contrary, they should help the practitioner in allotting time to do the necessary work. The parent should be informed that details are being sent at once to the dental surgeon, that an appointment must be sought as soon as possible, and that more than one may be necessary (if this is likely). If very early caries is detected, it is best to tell the parent that opinions differ as to the advisability of opening up a tooth at such an early stage of caries, but that it is a duty to report the discovery and leave the matter with the dental surgeon.

In the latter situation the orthodontist may be tempted to gloss the matter over diplomatically, for fear of offending a colleague. In so doing he would be sacrificing the welfare of the patient to a false ideal of professional etiquette. The right course is undoubtedly to tell the parent that a report will be sent to the dental surgeon, and a remark added that it is very easy indeed for a small cavity to be overlooked, but that it is certain that the matter will be put right without delay. Even in these circumstances there ought not to be any question of offense if a tactfully worded report is sent; and if offense is taken, it is clear that there is a sense of negligence at the root of it. A true spirit of cooperation would wipe out all this difficulty, and there should be a clear understanding on this point before treatment is started. The orthodontist will certainly be at fault if there is a failure to note the general condition of the teeth and soft tissues throughout the period of treatment and retention. The specialist who has had experience of general practice will be more apt to note, automatically, the condition of the mouth than one who has never had the whole responsibility for the dental welfare of children, but it is a point which must on no account be overlooked, in any case.

Cooperation from the dental surgeon is looked for by the orthodontist in the matter of oral hygiene. There are some children who will *not* keep either their teeth or their appliances clean without continual and forcible reminders. The more often the importance of cleanliness is impressed on them the better, and often a scale and polish acts as an encouragement, especially if green or black stain is present which makes it seem a thankless task to the child to brush without apparent result.

The orthodontist is often blamed, and sometimes by a colleague, for causing caries and also unhealthiness of soft tissues. If we are to be free from blame, we must not only see that our appliances are properly designed and made, but also that the children understand how to take care of them and clean them thoroughly without damaging them. It is not sufficient to insert an appliance, whether fixed or removable, and to expect the child to find out how to look after it.

Detailed instructions must be given, and if the child is going to boarding school, or away to a distant place where an unknown dental surgeon may be called upon to adjust or repair the appliance, it is a good plan to send with the child a short list of instructions as to the care of the appliance and indications as to what should be done in case of breakage. This would save loss of time and be a great help to the dental surgeon who may be consulted.

There should be a mutual desire to help, in the best interests of the patient, without any attempt at interference on either side, but a frankness and freedom of discussion on any point of interest which will leave no room for misunderstanding. This atmosphere will be sensed by the parent and will give added confidence.

**Anatomy as a Basis for Medical and Dental Practice:** By Donald Mainland, M.B., Ch.B., D.Sc., F.R.S.E., F.R.S.C., Professor of Anatomy, Dalhousie University, Halifax, N. S., Canada. Pp. 863. Price \$7.50. New York, Paul B. Hoeber, Inc., 1946.

Mainland prepared this text with the view in mind that anatomy books in the past have been loaded with a multitude of facts which could well have been omitted. This text, while including important facts, has been stripped of non-essentials. The main portion of the book is devoted to regional anatomy. The disadvantages of the traditional textbook have thus largely been avoided. The book is intended to be used in conjunction with other texts, and direct reference is given to such texts. Where questions are still unsettled, pros and cons are discussed.

Part 1 of the book deals with the general aims and methods in medical education. While Part 2 treats of the body as a whole, and its various components such as bones, joints, muscles, blood, nerves, and the skin and its appendages. Under regional anatomy we find a detailed description of the head and neck. Here the various bones of the head are discussed and described as are fossae, foramina, and other landmarks. Material is presented on the cephalic index, the various facial angles, and other landmarks. The development of the skull is presented. Attention is given to the triangles of the neck, the salivary glands, the teeth, and tooth development. A bibliography is appended for reference to the various texts. A detailed index makes this book easily usable as a reference text.

## News and Notes

### The Southwestern Society of Orthodontists

The twenty-sixth annual meeting of the Southwestern Society of Orthodontists was held at the Adolphus Hotel in Dallas, Texas, on Feb. 3, 4, and 5, 1947.

On Monday morning, Feb. 3, the meeting began with the welcoming address by Dr. Henry L. Rice, President of the Dallas County Dental Society. Dr. Brooks Bell then delivered the president's address.

"Oral Surgery in Orthodontics" by Dr. Glenn R. Hillin and Dr. Earle Williams and "Popular Conceptions of Orthodontics" by Dr. Jack W. Leach followed.

The annual Southwestern Golf Tournament held on Monday afternoon and was played over the D. A. C. Country Club Course.

On Tuesday, Dr. C. K. Madden of Greenwich, Connecticut, presented "The Johnson Twin Arch Appliance." The subject was divided into "The Philosophy of Treatment" and "The Procedure of Treatment." Discussion was opened by Dr. Nathan G. Gaston. Dr. Dan C. Peavy opened the discussion on "The Treatment of Various Types of Cases Using the Johnson Twin Arch Appliance." Dr. Madden added a few closing remarks.

Subsequently, a business luncheon was held for members of the Southwestern Society of Orthodontists and the American Association of Orthodontists only, at which time reports were read, and the election of new members and nomination and election of officers and committees were held.

A series of papers on dental caries were presented on Tuesday afternoon: "The Etiology of Dental Caries" by Dr. Bernard Gottlieb, Professor of Oral Pathology and Dental Research of Baylor College of Dentistry, Dallas, Texas, discussion by Dr. William R. Humphrey; "The Pathology of Dental Caries" by Dr. Harry Crawford, Instructor of Oral Pathology, Baylor University, discussion by Dr. Paul P. Taylor; "The Prevention of Dental Caries" by Dr. Harold B. Younger, Instructor of Oral Pathology, Baylor University, discussion by Dr. E. T. Gillean.

On Wednesday, Table Clinics were presented as follows:

#### TABLE CLINICS

J. Stier Cunningham, Chairman, Houston

"McCoy Open Tube Appliance." Louis S. Winston, Houston.

"A Few Treated Cases and Various Appliances Used." Tom M. Williams, Dallas.

"Another Method of Separating Teeth." Curtis W. Williams, Shreveport.

"Continuous Lingual Finger Springs." G. C. Turner, Lubbock.

"A Group Clinic by the Tweed Study Club of the Southwest." A. P. Westfall, Houston, C. T. Rowland, San Antonio, R. E. Gaylord, Dallas, and E. B. Arnold, Houston.

"Demonstrating Appliance Cleaner." S. D. Terrell, Fort Worth.

"Practice Management Aids." Harry H. Sorrels, Oklahoma City.

"Simple Appliance for Opening Mandibular Molar Space for Bridge Replacement." Charles F. Russell, Waco.

"To Be Announced." Roy G. Roberts, Wichita Falls.

"Mesioclusion Cases Treated in Deciduous Dentition Using the Oliver Mesio-Incisor Guide Plane." John W. Richmond, Kansas City.

"Suggestions of Appliance Fabrication." Dan C. Peavy, San Antonio.

"Construction of an Acrylic Bite Block." S. H. Johnston, Austin.

"To Be Announced." Paul Gilliam, Houston.

"Attachments Used With the Johnson Twin Arch Appliance." Nathan G. Gaston, Monroe.

"Some Modifications of Accepted Techniques and the Use of the New Oralloy Material." D. P. Comegys, Shreveport.

"Case Reports Using Occipital Anchorage." Donald A. Closson, Kansas City.

"Practical Orthodontics." W. R. Alstadt and T. B. Smith, Little Rock.

A business luncheon was again held for members of the Southwestern Society and the American Association of Orthodontists, after which the meeting was adjourned.

### Johnson Club

In the spring of 1944, a group met for luncheon at the Edgewater Beach Hotel in Chicago for the purpose of discussing the advisability of forming a club to be known as the Johnson Club.

Opinion expressed at that meeting indicated such a club to be desirable, and an organization committee was appointed to study the possibilities and report at a later date.

The committee has defined the purpose of this club as follows: "To study the possibilities of the treatment of irregularities of the teeth as developed by Dr. Joseph E. Johnson, to encourage this study by meetings at such times and places as may be desired, and to promote an interest which is found among those whose aims are dedicated to a common cause."

A committee was appointed who arranged for the first meeting of the Johnson Alumni Club, and this club held its organization meeting at the Brown Hotel in Louisville, Kentucky, on Jan. 20, 21 and 22, 1947. The organization was formally completed on that date.

Those who contributed to the formal scientific program were:

Lewman M. Waugh, New York, N. Y.

Joseph E. Johnson, Louisville, Ky.

George R. Moore, Ann Arbor, Mich.

Joseph D. Eby, New York, N. Y.

The clinics were presented as follows:

1. "A Simplified Photographic Technique." Dr. George E. Morgan, Milwaukee, Wis.

2. "An Elastic Impression Technique, With Bands in Position." Dr. Horace E. Wood, Dallas, Texas.

3. "The Treating Bite Plane." Dr. H. H. Williamson, Albany, Ga.

4. "An All Stainless Steel Assembly for the Twin Arch, and Pinching Pliers to Replace the Vise." Dr. A. Wolfson, Newark, N. J.

5. "A New Method for Fabricating the Twin Arch." Dr. Dan C. Peavy, San Antonio, Texas.

6. "Indirect Band and Appliance Making." Dr. Lowrie J. Porter, New York, N. Y.

7. "The Cuspid Lever and Twin Arch Attachments." Dr. Frank O. Clifford, Kokomo, Ind.

8. "Better Photography." Dr. H. D. Jaynes, Atlanta, Ga.

9. "A Lock Seating Plier." Dr. Roy D. Mitchell, Atlanta, Ga.

10. Subject to be announced. Dr. Floyd R. Arnold, Dearborn, Mich.

11. Subject to be announced. Dr. Edward A. Cheney and Dr. Gerald C. Barrow, Ann Arbor, Mich.

12. Subject to be announced. Dr. D. C. Miller, Columbus, Ohio.

A banquet was held Tuesday evening, January 21, in the ballroom of the Brown Hotel in Louisville in honor of Dr. Joseph E. Johnson.

### Pacific Coast Society of Orthodontists

The Pacific Coast Society of Orthodontists will hold its next general meeting in San Francisco, California, Feb. 24, 25, and 26, 1947.

J. CAMP DEAN, 1624 Franklin Building, Oakland, Calif., President.

### Northeastern Society of Orthodontists

The next meeting of the Northeastern Society of Orthodontists (formerly New York Society of Orthodontists) will be held at the Waldorf-Astoria Hotel, New York, on Monday and Tuesday, March 10 and 11, 1947.

### Central Section, American Association of Orthodontists

The Central Section of the American Association of Orthodontists will hold a scientific meeting at the Radisson Hotel, Minneapolis, Minnesota, on April 14 and 15, 1947—two full days of essays, case reports, and clinics.

### Southern Society of Orthodontists

The twenty-third annual meeting of the Southern Society of Orthodontists will be held in Mobile, Alabama, on April 21 and 22, 1947, with headquarters at the Hotel Battlehouse.

### Dutch Society for the Study of Orthodontics

On Oct. 4 and 5, 1946, the Dutch Society for the Study of Orthodontics (Nederlandsche Vereeniging voor Orthodontische Studie) was formed. The Society includes 200 members. The officers are:

President: J. A. C. Duyzings, Hamburgerstraat 19, Utrecht, Holland.

Vice-President: A. Edel, Jan Luykenstraat 94, Amsterdam, Holland.

Secretary-Treasurer: C. J. Sindram, Verbenalaan No. 14, Aerdenhout, Holland.

Lectures were delivered by:

Mr. A. Edel, "General View of Orthodontics Over the Years 1936-1946."

Mr. Harold Chapman, "Normal Occlusion of the Deciduous Teeth."

Mr. J. A. C. Duyzings, "Orthodontia, a Biological, Medical, and Dental Science."

Dr. J. V. Niekerk, "About Some Factors in the Development of the Osseous System and Dentition."

Dr. L. de Coster, "New Orthodontics Checking the Facial Growth," with demonstration of automatic appliances.

### District of Columbia Postgraduate Clinic

The District of Columbia Postgraduate Clinic (formerly the Five-State Postgraduate Clinic) will be held March 10, 11, 12, and 13, 1947, at the Statler Hotel, Washington, D. C., with Dr. James J. Greeves as general chairman.

### States With Dental Specialty Laws

<i>States</i>	<i>No. Certified to Sept. 1, 1946</i>	<i>Specialties</i>	<i>No.</i>
Illinois	134	Exodontia	10
Kansas	39	Oral Surgery	173
Michigan	311	Orthodontics	311
Oklahoma	34	Pedodontia	11
South Carolina	13	Periodontia	30
Tennessee	33	Prosthodontia	28
Total	564	Public Health Dentistry	1
		Total	564

**Notes of Interest**

According to reports received by the AMERICAN JOURNAL OF ORTHODONTICS AND ORAL SURGERY, Dr. Henry J. Toomey, orthodontist of Cleveland, Ohio, has been awarded the Legion of Merit by the War Department for meritorious conduct in the performance of outstanding service in the Southwest Pacific area during the period of Jan. 10, 1942, to July 28, 1945. Dr. Toomey attained the rank of Colonel as Chief of the Western Reserve University 4th General Hospital dental service from Jan. 10, 1942, to December, 1945, and spent four years in that capacity in the Southwest Pacific area. Dr. Toomey returned to the exclusive practice of orthodontics in March, 1946, at his former location in Cleveland, Ohio.

Theodore N. Engdahl, Jr., D.D.S., announces his release from duty in the Dental Corps, Army of the United States, and his association with Earl F. Lussier, D.D.S., F.I.C.D., in the exclusive practice of orthodontics, 36 So. El Camino Real, San Mateo, Calif.

Walter N. Epstein, D.D.S., M.S., announces the opening of his office at 6677 Delmar Blvd., University City 5, Missouri, practice limited to orthodontics.

Dr. William Roy Humphrey and Dr. George H. Siersma announce the association of Dr. Curtis E. Burson in the exclusive practice of orthodontics, 1232 Republic Building, Denver, Colorado.

John Rush McCoy, D.D.S., announces that he has discontinued his Beverly Hills office and will resume full-time practice at 3839 Wilshire Blvd., Los Angeles 5, Calif., practice limited to orthodontics.

Dr. Richard H. Stucklen announces the removal of his office to 908 Delaware Avenue, Wilmington 19, Delaware. (Orthodontics.)

Dr. Ralph Waldron announces the association of Dr. William R. Joule in the exclusive practice of orthodontics, 549 High Street, Newark 2, New Jersey.

## OFFICERS OF ORTHODONTIC SOCIETIES

The AMERICAN JOURNAL OF ORTHODONTICS AND ORAL SURGERY is the official publication of the American Association of Orthodontists and the following component societies. The editorial board of the AMERICAN JOURNAL OF ORTHODONTICS AND ORAL SURGERY is composed of a representative of each one of the component societies of the American Association of Orthodontists.

### American Association of Orthodontists

<i>President</i> , Earl G. Jones	- - - - -	185 East State St., Columbus, Ohio
<i>President-Elect</i> , Lowrie J. Porter	- - - - -	41 East 57th St., New York, N. Y.
<i>Vice-President</i> , G. Vernon Fisk	- - - - -	818 Medical Arts Bldg., Toronto, Ont., Can.
<i>Secretary-Treasurer</i> , Max E. Ernst	- - - - -	1250 Lowry Medical Arts Bldg., St. Paul, Minn.

### Central Section of the American Association of Orthodontists

<i>President</i> , C. S. Foster	- - - - -	803 Dows Bldg., Cedar Rapids, Iowa
<i>Secretary-Treasurer</i> , L. B. Higley	- - - - -	705 S. Summit St., Iowa City, Iowa

### Great Lakes Society of Orthodontists

<i>President</i> , S. Stuart Crouch	- - - - -	86 W. Bloor St., Toronto, Ont., Can.
<i>Secretary-Treasurer</i> , C. Edward Martinek	- - - - -	661 Fisher Bldg., Detroit, Mich.

### Northeastern Society of Orthodontists

<i>President</i> , Glenn H. Whitson	- - - - -	80 Hanson Pl., Brooklyn, N. Y.
<i>Secretary-Treasurer</i> , Oscar Jacobson	- - - - -	35 W. 81st St., New York, N. Y.

### Pacific Coast Society of Orthodontists

<i>President</i> , J. Camp Dean	- - - - -	1624 Franklin St., Oakland, Calif.
<i>Secretary-Treasurer</i> , Earl F. Lussier	- - - - -	450 Sutter St., San Francisco, Calif.

### Rocky Mountain Society of Orthodontists

<i>President</i> , Henry F. Hoffman	- - - - -	700 Majestic Bldg., Denver, Colo.
<i>Secretary-Treasurer</i> , George H. Siersma	- - - - -	1232 Republic Bldg., Denver, Colo.

### Southern Society of Orthodontists

<i>President</i> , J. E. Brown	- - - - -	Merchants National Bank Bldg., Mobile, Ala.
<i>Secretary-Treasurer</i> , Leland T. Daniel	- - - - -	407-8 Exchange Bldg., Orlando, Fla.

### Southwestern Society of Orthodontists

<i>President</i> , Brooks Bell	- - - - -	Medical Arts Bldg., Dallas, Texas
<i>Secretary-Treasurer</i> , James O. Bailey	- - - - -	Hamilton Bldg., Wichita Falls, Texas

### American Board of Orthodontics

<i>President</i> , Oliver W. White	- - - - -	213 David Whitney Bldg., Detroit, Mich.
<i>Vice-President</i> , Joseph D. Eby	- - - - -	121 E. 60th St., New York, N. Y.
<i>Secretary</i> , Bernard G. deVries	- - - - -	Medical Arts Bldg., Minneapolis, Minn.
<i>Treasurer</i> , James A. Burrill	- - - - -	25 E. Washington St., Chicago, Ill.
James D. McCoy	- - - - -	3839 Wilshire Blvd., Los Angeles, Calif.
Stephen C. Hopkins	- - - - -	1726 Eye St., N.W., Washington, D. C.
Reuben E. Olson	- - - - -	1115 River Blvd., Wichita, Kan.

In the January issue each year, the AMERICAN JOURNAL OF ORTHODONTICS AND ORAL SURGERY will publish a list of all of the orthodontic societies in the world of which it has any record. In addition to this, it will publish the names and addresses of the officers of such societies.